

MONTHLY WEATHER REVIEW
OF THE
ILLINOIS STATE WEATHER SERVICE

SPRINGFIELD, MARCH, 1888.

(The State covers such an extended area from north to south (385 miles) that it has been found advisable to divide the same and follow the judicial divisions, which include the following territory, viz: the Northern Division extends from 42° 30' to about 40° 31'; the Central Division extends from about 40° 31' to about 39°; the Southern Division from about 39° to 36° 51'.)

INTRODUCTORY.

The air pressure at the beginning of the month was slightly above the normal, but falling rapidly before the approaching "low" from the S.W., which passed over the State on the 2d, and moved rapidly eastward before an area of very high pressure on the 3d and 4th. This "high" was followed by a slight depression on the 5th, but from that date the pressure was above the normal until the 10th, when a marked "low" and storm center passed over from the S.W., bringing with it heavy rain in the Central and Southern Divisions, but mostly snow in the Northern Division. For some time after this "low" passed beyond this State it presented no very noticeable feature, but when it reached the Alleghany Mountains it seemed to separate into two parts, or to produce a subsidiary storm center, which brought with it the disastrous blizzard which swept over the Eastern seaboard from Virginia northward on the 11th and 12th.

The highest barometer of the month followed immediately on the heels of this "low," and from the 11th to the 17th the pressure continued above the normal, but from that date, with the exception of the 22d, it remained below the normal until the end of the month; the lowest point reached, and the lowest of the month, being on the 19th and 20th.

The temperature has been considerably below the average. In the Northern Division it was $4^{\circ}.5$ below; in the Central, $3^{\circ}.8$, and in the Southern, $4^{\circ}.3$. In the whole State it was $4^{\circ}.2$ below the average of ten years. Only once in ten years has the monthly mean for March been lower than that of the month just past—in 1881, when the mean temperature was $34^{\circ}.4$.

The deficiency of last year still continues, and has increased since the beginning of the present year. According to the Chief Signal Officer's Bulletin, issued on March 31st, the average deficiency of temperature in the Mississippi Valley since January 1st, covering a period of ninety-one days, was 593 degrees. The greatest deficiency—861 degrees—was at LaCross, Wis., and the least—266 degrees—at Cairo, Ill.

The rainfall in the State during the month was considerably above the average. In the Northern Division it was 1.11 inches above the average for the previous ten years; in the Central Division it was 1.06 inches, and in the Southern it was 1.29 inches above; while for the whole State it was 1.15 inches above the average for ten years.

The precipitation during January and February of the present year was considerably below the average, but March has supplied the deficiency and brought the rainfall of the three months up to the average. According to the Chief Signal Officer's Bulletin, above referred to, the deficiency that prevailed in the Upper Mississippi Valley, during January and February, has been changed into a slight excess.

Heavy rains prevailed through the State on the 25th and 26th, and the following unusually large rainfalls have been reported: 3.13 inches at Jordan's Grove; 2.10 inches at Benton; 2.06 inches at Peoria; 2.00 inches at Pana; 2.00 inches at Wapella; 2.00 inches at Prairieville; 2.00 inches at Flora; 2.00 inches at Mascoutah, and 2.00 inches at Three Mile.

METEOROLOGICAL REPORT.

ATMOSPHERIC PRESSURE.

(Inches and thousandths.)

The mean pressure of the month, as deducted from the reports of seventeen stations, where the readings are reduced to sea level, was 30.084. The highest was 30.743 at Pekin, and the lowest 29.350 at Prairieville, making the extreme range 1.393 inches.

TEMPERATURE.

(Degrees, Fahrenheit.)

The average temperature of March, 34°9, was 4°.2 below the average for the past ten years. The mean of the Northern Division was 29°.4; that of the Central Division, 35°.2, and that of the Southern, 40°.1.

The following are the most marked departures from the normal temperature for March:

ABOVE THE NORMAL.			BELOW THE NORMAL.		
County.	Place.	Deg.	County.	Place.	Deg.
			Christian	Pana	6.8
			Kane	Aurora	5.1
			Crawford	Palestine	5.5
			Lawrence	Sumner	4.5
			Sangamon	Springfield	4.4
			Cook	Chicago	4.2
			Stephenson	Ceda Ville	4.0
			Bond	Greenville	3.8
			McHenry	Alley	3.7

Only two stations in the State reported a mean temperature above the normal.

MAXIMUM AND MINIMUM TEMPERATURE.

Table of maximum, minimum and mean temperatures for March.

TEMPERATURE.	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	Average.
Maximum.....	82	86	74	78	80	75	76	80	84	82	84	80
Minimum.....	18	zero	5	2	8	3	-7	-4	-7	-7	-10	0.2
Mean.....	49.1	40.3	38.3	34.4	43.2	36.0	38.2	35.3	38.5	37.8	34.9	38.7

PRECIPITATION.

(Inches and hundredths.)

The following table shows the average precipitation for the State and its principal divisions during the past eleven Marches. The average for the State, 3.76 inches, is 1.15 inches above the average of the preceding ten Marches.

TERRITORY.	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	Average.
Northern Division..	2.66	1.10	2.44	3.96	3.81	0.69	2.41	0.38	3.03	1.02	3.26	2.26
Central Division....	3.67	1.70	2.50	4.72	5.15	1.25	2.66	0.28	2.49	1.70	3.68	2.72
Southern Division..	2.00	2.10	3.88	2.58	4.66	2.85	3.87	0.75	4.27	4.19	4.35	3.19
The State.....	2.78	1.67	2.94	3.75	4.54	1.60	2.81	0.47	3.26	2.30	3.76	2.72

METEOROLOGICAL REPORT.

The following are the most marked departures from the normal precipitation for March:

ABOVE THE NORMAL.			BELOW THE NORMAL.		
County.	Place.	Inches.	County.	Place.	Inches.
Christian.....	Pana	3.79			
Tazewell.....	Pekin	3.72			
Pope.....	Golconda	3.36			
Greene.....	White Hall	2.47			
Pike.....	Griggsville	2.10			
Hamilton.....	McLeansboro.....	1.98			
Stephenson.....	Cedarville	1.99			
Adams.....	Payson	1.88			
Crawford.....	Palestine	1.85			

Only five stations reported below the normal, and they but slightly.

MEAN RELATIVE HUMIDITY.

NORTHERN DIVISION.		CENTRAL DIVISION.		SOUTHERN DIVISION.	
Station.	Per cent.	Station.	Per cent.	Station.	Per cent.
Lake Forest	72.9	Pekin	79.1	Richview	76.4
Chicago.....	72.0	Keokuk, Iowa.....	70.6	Cairo	68.6
Aurora.....	83.0	Springfield.....	72.5	St. Louis	70.8
Prairieville.....	76.2	Windsor	87.3		
Peoria.....	67.0	Jacksonville	81.0		
Watseka.....	82.0				
Monmouth.....					
Davenport, Ia.....	74.0				
Mean.....	76.7	Mean.....	78.1	Mean.....	71.9

The mean relative humidity for State, 75.8 per cent.

WIND.

The following is the wind data for March, as reported from stations having self-registering anemometers:

STATIONS.	WIND—Miles.		
	Total movement.	Avg. hourly velocity.	Maximum hourly velocity—direction and date.
Chicago.....	8,941	12.0	37—W. on the 21st.
Prairieville.....	9,236	12.4	50—W. on the 21st.
Davenport, Ia.....	7,537	10.1	48—W. & N.W. on the 21st.
Watseka	8,626	11.6	28—N.W. on the 21st.
Keokuk, Ia.....	8,817	11.3	36—N.W. on the 21st.
Springfield.....	7,420	10.0	28—W. & N.W. on the 1st and 21st.
Jacksonville.....	7,821	10.5	32—W. on the 21st.
Windsor	7,827	10.5	32—S.E. on the 22d.
St. Louis, Mo.....	9,663	13.0	48—W. on the 20th.
Cairo.....	7,410	10.0	30—S.W. & S.E. on the 11th.

NOTE: The average hourly velocity is obtained by dividing the total movement by 24 time the number of days in the month.

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DIRECTION OF WIND.

TERRITORY.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Northern Division	0	5	0	1	2	0	6	13
Central Division	5	3	0	1	2	2	0	11
Southern Division	1	2	0	2	2	2	1	8
The State	6	10	0	4	6	4	7	32

THUNDERSTORMS.

Pana, on the 10th; Peoria, on the 26th; Keokuk, on the 25th; Cairo, on the 10th and 20th; Fairview, on the 26th; Ottawa, on the 26th; Pekin, on the 26th; Windsor, on the 10th; Beason, on the 26th; Louisiana, on the 25th; Flora, on the 10th and 16th; Philo, on the 9th and 19th; Carlyle, on the 10th and 16th; Greencastle, on the 10th and 16th; Albion, on the 10th, 16th and 20th; Richview, on the 16th and 20th; Lacon, on the 26th; Griggsville, on the 26th; Mascoutah, on the 10th, 16th and 24th; Jordan's Grove, on the 10th and 25th; Payson, on the 1st, 19th and 25th; Olney, on the 19th; Vandalia, on the 10th; Old DuQuoin, on the 10th; and Jacksonville, on the 23d.

OPTICAL PHENOMENA.

SOLAR HALOS.

Dwight, on the 8th and 13th; Springfield, on the 1st, 7th, 8th, 18th, 21st, 29th and 31st; Cedarville, on the 22d; Beason, on the 29th and 31st; Philo, on the 31st; Riley, on the 5th, 7th, 8th, 12th, 15th, 16th, 24th, 29th and 30th; Lanark, on the 24th, 29th and 30th; Watseka, on the 12th, 29th and 31st; Jordan's Grove, on the 12th; Payson, on the 12th; Woodstock on the 8th and 24th; Aurora, on the 22d; Oneida, on the 30th; Prairieville, on the 18th and 22d; and Jacksonville, on the 7th, 8th, 16th and 21st.

LUNAR HALOS.

Springfield, on the 28th; Fairview, on the 21st; Pekin, on the 15th and 16th; Sterling, on the 17th and 18th; Beason, on the 22d; Riley, on the 20th and 24th; Payson, on the 17th and 18th; Woodstock, on the 24th; Mt. Morris, on the 20th and 24th; Olney, on the 28th; and Belvidere, on the 24th.

PARHELIA.

Philo, on the 22d; Lanark, on the 18th and 22d; Albion, on the 12th; and Jacksonville on the 7th.

POLAR BANDS.

Pekin, on the 12th, 13th, 20th, 27th, 28th and 30th.

METEOROLOGICAL REPORT.**MISCELLANEOUS PHENOMENA.****HAIL.**

Vandalia, on the 10th; Carlyle, on the 10th; Oneida, on the 10th and 25th; Cedarville, on the 25th; Pekin, on the 25th.

FROST.

Frosts were reported on about 25 days in the month, the majority occurring in the Northern Division.

FLIGHT OF BIRDS, &c.

Dwight, bluebirds, larks and robins seen for the first time on the 16th; Fairview, robins and bluebirds on the 16th; Ottawa, robins on the 25th; Cedarville, bluebirds on the 10th; Sycamore, bluebirds on the 16th, meadow larks on the 16th; Philo, cranes going south on the 25th; Riley, bluebirds, robins, meadow larks and red-winged blackbirds on the 18th; Lanark, bluebirds on the 15th, robins and larks on the 19th; Watseka, robins on the 15th; Albion, wild geese going north on the 12th; Lacon, robins on the 16th, swallows on the 22d; Jordan's Grove, blackbirds on the 12th; Payson, bees flying freely on the 18th, sandhill cranes observed on the 29th, golden-winged woodpeckers and ground thrushes on the 31st.

SUNSPOTS, MARCH, 1888.

RECORDED BY JOHN W. JAMES, VOL. OBSERVER, RILEY.

The only ones seen were a moderately large spot and a few very small ones 2 degrees from E. edge, on the 11th; large spot on the sun's meridian on the 14th, and disappeared by the solar rotation on the 20th. The small ones not seen after the 16th.

THE following Weekly Weather Crop-Bulletins have been issued by this office during March, 1888; being a summary of the weekly reports made to the Secretary of the State Board of Agriculture, by the Observers of the Illinois Weather Service and Crop Reporters, in connection with the U. S. Signal Service.

SPRINGFIELD, ILL., March 3, 1888.

WEATHER.

Temperature.—The temperature throughout the State during the past week has been seasonable. In the Northern Division the weather has been slightly colder, and in the Central Division some warmer than the average for the corresponding week in previous years.

Rainfall.—There is quite a general complaint of the absence of seasonable rainfall and only the counties of Lake, Grundy, Hancock, DeWitt, Bond, Wayne and Monroe report more than an average weekly rainfall.

Sunshine.—Cloudy weather has been quite prevalent throughout the State, and only in the counties of Winnebago, Hancock, Tazewell, Sangamon and Massac has there been more than the seasonable amount of sunshine during the past week.

CONDITION OF CROPS.

Winter Wheat.—The winter wheat area of the State is somewhat less than that of the preceding year. The average condition of the growing crop in December, 1887, was 86 per cent. of an average. The prospects are encouraging for an average yield per acre in the counties of Putnam, Hancock, Henderson, Sangamon, Morgan, Pike, Richland, Monroe, Pulaski and Massac, and nearly an average in the counties of Tazewell, Mason, Cass, DeWitt, Christian and Saline. The most favorable reports concerning the condition of winter wheat come from the counties of Bond, Clinton, Wayne and Jackson.

Rye.—The area of this crop is about the same as that harvested last season, and the December, 1887, condition of this crop was 88 per cent. This crop has wintered better than wheat, and in the majority of the counties from which reports have been received, the condition is up to an average. The condition of this crop is more unfavorable in the counties of Clinton and Wayne than elsewhere.

Pastures.—The condition of grass lands is much below a seasonable average, owing largely to the prevailing drouth during the past season. In only five counties from which reports have been received, is the condition of pastures up to an average. The most unfavorable reports concerning the prospects for pastures come from the counties of Kendall, Grundy, Woodford, Clinton, Monroe, Jackson and Saline.

Fruit Trees.—In the Southern portion of the State the reports indicate that orchards promise an average crop of fruit and in some of the Central counties fruit trees are in fair condition.

METEOROLOGICAL REPORT.

Live Stock.—Farm animals are not up to an average in condition, but the reports indicate that notwithstanding the scarcity of the supply of forage and grain resulting from the drouth of 1887, that live stock has been brought through the winter in fair condition. In the following counties, live stock is reported in average condition, viz: Lake, McHenry, Woodford, Morgan, Douglas, Shelby, Monroe and Jackson.

SPRINGFIELD, ILL., March 10, 1888.

WEATHER.

Temperature.—The temperature for the past week has been seasonable, slightly below the average in the Northern and Southern divisions. In only eight counties in the State has the temperature for the week been reported above the average.

Rainfall.—The precipitation for the week ending March 10, has been below the average for corresponding weeks in previous years, in all except one county (Tazewell). In many counties there was no rain during the week until Friday, when there was a very general rainfall, and in the Central division no deficiency is reported. Some tile show a flow that have been dry for over a year past.

Cloudiness.—The cloudiness was less than during the preceding week. In two counties in the Northern division and in one of the Central division there was more than the average cloudiness. There was more than a seasonable amount of cloudiness in the Southern portion of the State during the week.

CONDITION OF CROPS.

Winter Wheat.—The condition of winter wheat is somewhat better than reported March 3, and with favorable season until harvest an average yield per acre may be expected. The most unfavorable prospects for winter wheat are reported by the correspondents in the following counties, where the condition is as noted: Kendall, Madison, White, Clay, 75; Iroquois and Woodford, 80; Cumberland, 60; Bond, 50; Wayne and Pope, 70. The recent rains have improved the appearance of the wheat.

Rye.—The condition of rye has improved during the past week, and except in a few counties it is up to a seasonable average. Except in the counties of Clinton and Wayne, the prospect is favorable for from three-fourths to an average yield per acre. The most favorable reports concerning the condition of rye comes from the following counties, in which there will be an average or better yield per acre, viz: McHenry, Winnebago, Ogle, Will, Putnam, Peoria, Henderson, Hancock, Pike, Morgan, Sangamon, Douglas, Clay and Monroe.

Grass Lands.—Meadows and pastures have been benefitted by the late rains, but much more rain is needed to thoroughly saturate the ground. Pastures are not up to an average seasonable condition, and the prospects for the next hay crop are not flattering. There is considerable complaint of the serious damage to meadows, the result of the drouth of the past season.

Fruit.—The prospects are not favorable for an average crop of fruit in but few counties in the State. The orchards are in better condition in the Southern portion of the State than elsewhere. The fruit trees are looking well in the counties of Massac, Pulaski, Union, Jackson, Franklin, Gallatin, Wayne, Clay, Clinton, Fayette, Shelby, Montgomery and Cumberland. In the more northern counties the prospects for fruit are not as good as in the counties named.

Live Stock.—The scarcity of the grain and forage crops last harvest has influenced many to feed sparingly during the past winter, and farm animals are consequently not in as good condition as usual for this season. There is no complaint of any prevailing disease among farm animals in any portion of the State.

SPRINGFIELD, ILL., March 17, 1888.

WEATHER.

Temperature.—The temperature during the past week has been slightly below a seasonable average. In thirteen counties the temperature was up to an average and in only five counties was the weather warmer than in the corresponding weeks in former years. In the remaining counties from which reports have been received, the temperature has been colder than usual.

Rainfall.—The precipitation has been less than the average of the corresponding week in previous years. The rainfall on the 8th and 10th of March was quite general throughout the State, and brings the general average of the past two weeks nearly up to a seasonable amount.

Cloudiness.—The percentage of sunshine has been rather above the average for the season in all portions of the State during the past week.

CONDITION OF CROPS.

Winter Wheat.—The late freezing and thawing weather has been very trying on winter wheat. The early sown wheat made fair growth last fall and is in much better condition than the late seeding. There has been but little growth of the plant this season, and it is rather early to determine the outlook for a considerable portion of the crop which still wears its brown winter coat. The wheat plant is passing through the most critical season, and the prospects of the crop cannot be even approximated until warm rains and favorable weather have given the wheat a chance to grow. The most encouraging reports concerning the condition of wheat come from correspondents residing in the following counties, in which the condition is up to a season average, viz: Stephenson, Winnebago, McHenry, LaSalle, Will, Putnam, Marshall, Peoria, Mason, Pike, Morgan, Sangamon, Macon, Shelby and Montgomery. The prospects for wheat are not as favorable as last week in the following counties, in some of which not over half an average yield per acre is predicted by reporters, viz: Iroquois, Logan, Madison, Clinton, Randolph and Jackson. The ill effects of the long continued drouth before and after seeding wheat are manifested and with the unfavorable conditions of the weather in March and April to contend with, the prospects for the next crop of winter wheat cannot be predicted.

Rye.—There is but little change reported in the condition of rye during the past week. The prospects for the crop in some counties are not as favorable as on the 10th of March and the above remarks on wheat will apply to this crop.

Grass.—There has been no apparent improvement in the condition of meadows and pastures during the past week, and the prospects for pasturage and the next hay crop are not encouraging. Meadows and pastures have suffered severely from dry weather the past two seasons, and it will be difficult to determine the extent of the damage therefrom until the effects of warm spring rains and seasonable weather can be observed in the growth of the grass.

Fruit.—There has been no improvement in the prospects for fruit during the past week. In some counties the reports show that more injury to orchards was sustained from the extreme cold weather during the past winter, than heretofore reported.

Live Stock.—There has been some improvement during the past week in the condition of farm animals in all the counties from which reports have been received.

SPRINGFIELD, ILL., March 24, 1888.

WEATHER.

The mean temperature of the State during the past week has been much below the average. The range of the temperature has been marked, being about 50 degrees from the 19th to the 22d.

On the 19th and 20th the temperature was unusually high, ranging from 50 to 80 degrees above zero, while on the 22d it dropped to zero in the northern portion of the State, and at correspondingly low figures in the central and southern portions.

METEOROLOGICAL REPORT.

Precipitation.—There was about the average rainfall during the past week, but a larger per centage of snow fell than on the corresponding weeks in previous years. There is still a scarcity of rainfall as compared with the average precipitation for the first quarter during a term of years.

Sunshine.—There has been a lack of sunshine and growing weather, as compared to corresponding weeks in prior years.

CONDITION OF CROPS.

Winter Wheat.—The weather during the past week has been very unfavorable for wheat, and the late extreme change in the temperature is likely to still further reduce the prospects for the coming crop. The reports indicate that the wheat plant generally lacks vigor and seasonable growth, and excepting the early seeding the prospects for winter wheat are more discouraging than heretofore supposed. The most marked decline during the past week in the condition of wheat is reported from the following counties, in which the prospects have been reduced since last report as noted, viz: Winnebago, 25 per cent.; Iroquois, 25; Logan, 35; Champaign and Christian, 15; Shelby, 40; Bond, 25; Randolph, 15; Hamilton, 20.

Oats.—A large area has been plowed for oats, and but for the late freeze would have been seeded during the past week. The late favorable weather will seriously interfere with the seasonable seeding of oats.

Rye.—The prospects for rye are not as good as reported March 17, owing to the continued unfavorable conditions of the weather.

Grass.—The growth of grass is not as far advanced as usual at this season, and there is much concern expressed for the condition of meadows and pastures. Hope has been entertained by the majority of feeders, for early pastures, so much needed to relieve the anxiety occasioned by the limited supply of grain and forage, resulting from the drouth during the last season.

Fruit.—There is complaint that the fruit buds have been injured by the "cold snap" of the past week, but the extent of the damage to the heretofore unfavorable fruit prospects cannot be determined with any satisfaction at present.

SPRINGFIELD, ILL., March 31, 1888.

WEATHER.

The mean temperature for the week ending March 31 has been below the average of corresponding weeks of previous years. It was unusually cold and disagreeable during the early part of the week, and in marked contrast with the warm pleasant weather of the 30th and 31st. Frost prevailed in the Northern division of the State during the week, and in the northern counties of the Central division.

The season since the first of the year has been much colder than usual, and the large deficiency in temperature is still increasing.

Precipitation.—The rainfall during the past seven days was slightly above a seasonable weekly average in all portions of the State. In the northern portion there was an unusually heavy snowfall, and some snow is reported in the central portion of the State. The precipitation for the first quarter of 1888 is much below the average for the corresponding period in previous years.

Sunshine.—The per centage of sunshine during the week was much below the average. Excepting the last two warm days, cloudiness has prevailed almost entirely during the past week.

CONDITION OF CROPS.

Winter Wheat.—There has been no improvement in the condition of the crop during the past week in any portion of the State, excepting in the counties of Pulaski, Union, Bond and Effingham, where the damage to the plant is not as serious as heretofore reported. In the following counties the late extreme cold weather has reduced the prospects for wheat,

compared with the returns of March 24, viz: Putnam, Marshall, Peoria, Iroquois, Morgan, Shelby and Calhoun. Many fields of wheat that on the 1st day of March promised well are reported damaged to such an extent as to make it advisable to plow under and seed the land to spring crops. The cause is generally attributed to frequent and sudden changes in the temperature, a few days of warm growing weather followed by severe freezing. Seasonable weather during the next ten days will demonstrate as heretofore that some unpromising fields of wheat in all portions of the State are not as seriously damaged as reported, while a repetition of the weather of the past two weeks will leave but little room for expectation for even half an average yield per acre.

Oats.—The weather during the past two weeks has not been favorable for sowing oats, and the rain and snow of the past week will still further delay seasonable seeding of this crop.

Rye.—A slight improvement in the condition of rye is reported in some of the southern counties. This crop appears to have been damaged less during the late freezing weather than wheat, and in some of the central and northern counties is up to a seasonable average in condition.

Grass.—The late rains and snow have benefitted meadows and pastures, and the prospect for grass is better than last week. The condition of meadows and pastures is still much below a seasonable average and more rain is needed to insure a fair crop of hay.

Fruit.—There is no improvement reported in the prospect for apples and other fruits since March 24, excepting in the counties of Clinton and Effingham. The condition of fruit is not as promising as heretofore reported in the counties of Henry, Winnebago, Champaign, Wayne and Union.

Live Stock.—There is no complaint of any prevailing disease among farm animals. The condition of stock is much below a seasonable average and many farmers have about exhausted their supply of forage and grain and are anxiously looking for some indication of the coming of spring and the growth of grass.

REMARKS.

METEOROLOGICAL OBSERVERS.

MONTH OF MARCH, 1888.

ADAMS COUNTY—DANIEL E. ROBBINS, Observer, Payson. Highest temperature 71° , on the 18th; lowest, 9° , on the 8th and 22d; range, 62° ; greatest daily range, 82° , on the 18th; least daily, 1° , on the 24th; mean daily range, $15^{\circ}.58$. The mean temperature of the month, $30^{\circ}.7$, was $1^{\circ}.9$ below the normal for the past three years. The precipitation, 4.24 inches, was 1.88 inches above the normal for the past three years, falling on thirteen days, viz: 1st, 2d, 4th, 5th, 9th, 10th, 16th, 19th, 20th, 21st, 25th, 29th and 28th. Prevailing direction of the wind, N.W. & N.E.; maximum velocity, high from the N.W., on the 21st. There were 8 clear, 11 fair and 12 cloudy days. Total snowfall, 6 inches, of which none remained on the ground at the end of the month. Solar halos on the 12th. Lunar halos on the 17th and 18th. Thunderstorms on the 1st, 19th and 25th. The rain of the 24th began freezing on trees, etc., at 9 a.m., and before night trees began to break under the load, but few trees escaped injury and many were ruined; as a sample of the load I picked up a maple twing $\frac{1}{2}$ of an inch in diameter and the oval of ice was $1 \times 1 \frac{1}{4}$ inches. Bees gathered pollen on the 18th. Meadow larks appeared on the 1st; robins on the 6th; sand hill cranes and turtle doves on the 29th; golden winged wood pecker on the 30th, and ground thrush on the 31st.

ALEXANDER COUNTY—C. L. BOZZELL, Observer, Signal Corps, Cairo. Highest barometer, 30.540, on the 11th; lowest, 29.580, on the 20th; mean, 30.117; range, 0.98. Highest temperature, $76^{\circ}.2$, on the 31st; lowest, $21^{\circ}.0$, on the 22d; range, $55^{\circ}.2$; greatest daily range, $32^{\circ}.1$, on the 18th; least daily, $2^{\circ}.6$, on the 4th; mean daily range, $16^{\circ}.5$; mean maximum temperature, $53^{\circ}.0$; mean minimum, $36^{\circ}.5$. The mean temperature of the month, $44^{\circ}.9$, was $2^{\circ}.2$ below the normal for the past sixteen years. The precipitation, 4.91 inches, was 1.12 inches above the normal for the past sixteen years, falling on thirteen days, viz: 1st, 2d, 4th, 5th, 10th, 19th, 20th, 21st, 24th, 25th, 26th, 27th and 28th. Mean relative humidity, 68.6 per cent. Prevailing direction of the wind, N.; total movement, 7,410

miles; maximum velocity, 80 miles from the S.W., on the 11th. There were 10 clear, 5 fair and 16 cloudy days. Thunderstorms on the 10th and 20th.

BOND COUNTY—M. S. OUDYN, Ph. G., Observer, Greenville. Highest temperature, 73° , on the 30th; lowest, 10° , on the 22d; range, 63° ; greatest daily range, 35° , on the 30th; least daily, 7° , on the 4th; mean daily range, $19^{\circ}.7$; mean maximum temperature, $48^{\circ}.5$; mean minimum, $28^{\circ}.8$. The mean temperature of the month, $38^{\circ}.2$, was $3^{\circ}.8$ below the normal for the past nine years. The precipitation, 3.64 inches, was 0.87 of an inch above the normal for the past five years, falling on ten days, viz: 1st, 5th, 10th, 16th, 19th, 20th, 24th, 25th, 26th and 28th. Prevailing direction of the wind, N.W. There were 12 clear, 4 fair and 15 cloudy days. Total snowfall, 2.1 inches, of which none remained on the ground at the end of the month. Thunderstorms on the 10th and 16th.

BOONE COUNTY—E. L. LAWRENCE, Observer, Belvedere. Highest temperature, 54° , on the 19th; lowest, 2° , on the 22d; range, 52° ; greatest daily range, 21° , on the 15th 21st; least, 4° , on the 5th. The mean temperature of the month, $27^{\circ}.4$, was 6.5° below the normal for the past ten years. The precipitation, 2.67 inches, was 1.84 inch more than last March, falling on seven days, viz: 1st 11th 17th, 19th, 23rd 25th and 26th. Prevailing direction of the wind, N.W.; maximum velocity, 18 miles from the N.W. on the 21st. There were 11 clear, 4 fair and 16 cloudy days. Total snowfall, 3 inches, of which none remained on the ground at the end of the month. Lunar halo on the 24th.

CARROLL COUNTY—CHAS. H. BEELER, Observer, Lanark. Highest temperature, 53° , on the 30th; lowest, -5° , on the 22d; range, 58° ; greatest daily range, 28° , on the 14th; least daily, 3° , on the 17th. The mean temperature of the month was $27^{\circ}.4$. The precipitation was 4.04 inches, falling on ten

days, viz: 1st, 2d, 4th, 9th, 10th, 17th, 19th, 20th, 23d, 25th and 26th. Prevailing direction of the wind, N. W.; maximum velocity high from the N. W., on the 21st and 22d. There were 10 clear, 9 fair and 12 cloudy days. Solar halos on the 24th, 29th and 30th. Rainbow on the 19th at 6 p.m. Mocksuns on the 13th and 22d. First bluebirds noticed on the 15th. Ducks flying north on the 18th. Robins, larks and geese on the 19th.

CHAMPAIGN COUNTY—HUBERT BURR, Observer, Philo. Highest barometer, 30.46, on the 11th; lowest, 29.55, on the 20th; mean, 30.08; range, 1.091. Highest temperature, 86°, on the 30th; lowest, 6°, on the 22d; range, 60°; greatest daily range, 27°, on the 30th; least daily, 4°, on the 24th; mean daily range, 9°.6; mean maximum temperature, 29°.5; mean minimum, 27°.9. The mean temperature of the month, 33°.6, was 1°.6 below the mean of the past three years. The precipitation, 2.77 inches, was 0.32 of an inch below the mean of the past three years, falling on seven days, viz: 1st, 9th, 10th, 16th, 19th, 24th and 25th. Prevailing direction of the wind, N. E.; maximum velocity, 36 miles from the N. W., on the 21st. There were 13 clear, 5 fair and 13 cloudy days. Solar halos on the 31st. Parh lia on the 22d. Cold wave on the 10th, temperature fell 13° in one hour.

CHRISTIAN COUNTY—J. K. EBERLE, Observer, Pana. Highest temperature, 80°, on the 30th; lowest, 6°, on the 22d; range, 54°. The mean temperature of the month, 30.71. The precipitation, 8. inches, falling on thirteen days, viz: 1st, 4th, 5th, 9th, 10th, 19th, 19th, 20th, 24th, 25th, 26th, 27th and 28th. Prevailing direction of the wind, N. E. & N. W. There were 10 clear, 5 fair and 16 cloudy days. Total snowfall, 1.50 inches, of which 1 inch remained on the ground at the end of the month. Thunderstorm on the 10th.

CLARK COUNTY—J. B. SHEAPLEY, Observer, Martinsville. Highest barometer, 29.68, on the 3d; lowest, 28.45, on the 20th; mean, 29.355; range, .83. Highest temperature, 68°, on the 30th; lowest, 10°, on the 22d; range, 58°; greatest daily range, 27°, on the 18th and 29th; least, 2°, on the 16th. The mean temperature of the month was 35°.9. The precipitation was 2.22 inches, falling on nine days, viz: 5th, 9th, 10th, 20th, 23d, 24th, 25th, 26th and 27th. Prevailing direction of the wind, N. & N. E.; maximum velocity, 12 miles, from the S. W., on the 18th. There were 13 clear, 2 fair and 16 cloudy days. Total snowfall, 2.25 inches, of which none remained on the ground at the end of the month. The most remarkable feature was calmness, there being but four in days which the velocity reached 10 miles per hour, and many days but a gentle breeze. The freezing and thawing has injured the wheat much. Stock healthy, but generally thin in flesh, owing to light feeding. Ground very mellow and will plow fine if we have no heavy rains. No plowing done yet.

CLAY COUNTY—L. A. MICHELS, Observer, Flora. Highest temperature, 68°, on the 30th; lowest, 14°, on the 22nd; range, 54°; greatest daily range, 27°, on the 16th and 30th; least daily, 8°, on the 4th and 16th; mean daily, 18°; mean maximum temperature, 47°; mean minimum, 31°. The mean temperature of the month was 38°. The precipitation, was 5.22 inches, falling on eight days, viz: 2nd, 10th, 16th, 19th, 20th, 24th, 25th and 27th. There

were 11 clear, 5 fair and 15 cloudy days. Total snowfall 2 inches, of which none remained on the ground at the end of the month. Thunderstorms on the 10th and 16th. Frogs croaking on the 1st. Heavy frosts on the 7th, 8th, 15th and 29th. Light frost on the 30th.

CLINTON COUNTY—WM. ROGAN, Observer, Irishtown. Highest temperature, 74°, on the 30th; lowest, 13°, on the 22d; range, 61°; greatest daily range, 31°, on the 18th; least daily, 1°, on the 19th; mean daily, 12°.1; mean temperature of the month, 40°.2, was 0°.4 above the mean of the past two years. The precipitation, 3.40 inches, was .06 of an inch above the mean of the past two years, falling on eleven days, viz: 1st, 5th, 10th, 16th, 17th, 19th, 21st, 24th, 25th, 26th and 28th. There were 8 clear, 7 fair and 16 cloudy days. Total snowfall, .50 of an inch, of which none remained on the ground at the end of the month. The temperature fell 18° from 2 p.m. to 3 p.m. on the 10th. Thunder, lightning and hail at 4 p.m. on the 10th; wind N. W. Thunder at 9 p.m. on the 16th; wind N. W. Prevailing direction of wind for the month, N.

COLES COUNTY—WM. DOZIER, Observer, Mattoon. Highest temperature, 71°, on the 30th; lowest, 8°, on the 22nd; range, 63°. The mean temperature of the month, 35°, was 3°.3 below the normal for the past 8 years. The precipitation, 3.20 inches, was 0.22 inch below the normal for the past 8 years, falling on 12 days, viz: 1st, 5th, 9th, 10th, 13th, 16th, 19th, 20th, 24th, 25th, 26th and 29th. Prevailing direction of the wind, N. There were 10 clear, 12 cloudy and 9 fair days. Total snowfall, 1.0 inch, of which none remained on the ground at the end of the month. White frost on 8 days. Rain and snow on 12.

COOK COUNTY—H. C. FRANKINFIELD, Observer, Signal Corps, Chicago. Highest barometer, 30.550, on the 12th; lowest, 29.440, on the 20th; mean, 30.110; range, 1.110. Highest temperature, 64°.0, on the 19th; lowest, -1°.0, on the 22d; range, 65°.0; greatest daily range, 30°.4, on the 20th; least daily, 3°.4, on the 29th; mean daily range, 14°.4; mean maximum temperature, 37°.1; mean minimum, 22°.7. The mean temperature of the month, 30°.5, was 4°.2 below the normal for the past sixteen years. The precipitation, 2.99 inches, was 0.86 of an inch above the normal for the past sixteen years, falling on twelve days, viz: 1st, 2d, 4th, 9th, 10th, 11th, 19th, 20th, 23d, 24th, 25th and 26th. Mean relative humidity, 72 per cent. Prevailing direction of the wind, N. E.; total movement, 8,941 miles; maximum velocity, 37 miles from the W., on the 21st. There were 7 clear, 11 fair and 13 cloudy days. The mean temperature of March has been only three times lower in sixteen years—1872, when it was 27°.6; in 1877, when it was 29°.4; and in 1885, when it was 30°.0.

CRAWFORD COUNTY—J. R. TEMPLETON, Observer, Palestine. Highest temperature, 73°, on the 18th; lowest, 12°.2, on the 22nd; range, 60°.8. The mean temperature of the month, 39°.3, was 5°.5 below the normal for the past six Marches. The precipitation, 4.72 inches, was 1.85 inches above the normal for the past six Marches, falling on fourteen days, viz: 1st, 2nd, 5th, 10th, 16th, 17th, 19th to 21st, and 23rd to 27th. Prevailing direction of the wind, South. There were 11 clear, 6 fair and 14 cloudy days. Total snowfall, 3.60 inches, of which none remained on the

ground at the end of the month. Soft maple and red elm in bloom on the 30th. Pee-wits appeared on the 31st. The season is very backward, the wheat and grass have made but little growth.

DEKALB COUNTY—ROSWELL DOW, Observer, Sycamore. Highest temperature, 52°.2, on the 30th; lowest, zero, on the 22nd; range, 52°.2; greatest daily range, 26°, on the 15th; least, 3°.7, on the 4th. The mean temperature of the month, 27°.9, was 3° below the normal for the past seven years. The precipitation, 2.59 inches, was .39 inches more than the normal for the past seven years, falling on eleven days, viz: 1st, 2nd, 4th, 9th, 10th, 17th, 19th, 20th, 23rd, 25th and 26th. Prevailing direction of the wind, S.E. & N.W., maximum velocity, 35 miles from the N.W., on the 21st. There were 9 clear, 9 fair and 13 cloudy days. Total snowfall, 1.6 inches, of which none remained on the ground at the end of the month. Frost every day excepting the 1st, 9th, 19th and 26th. Wind N. 8, N.E. 13, E. 7, S.E. 23, S. 2, S.W. 7, W. 7, and N.W. 26 times. Wild geese appeared on the 11th. Blue-birds on the 15th, and Meadow-larks on the 16th.

DOUGLAS COUNTY—MISS MARY ILES, Observer, Camargo. Highest temperature, 68°.0, on the 30th; lowest, 8°.0, on the 22d; range, 66°. The mean temperature of the month was 33°.6. Prevailing direction of the wind, N.W. There were 8 clear, 6 fair and 17 cloudy days. Has been a very cold and cloudy month, with considerable rain and sleet and high winds.

DUPAGE COUNTY—R. F. MORGAN, Observer, Wheaton. Highest temperature, 58°, on the 31st; lowest, -2°, on the 2d; range, 60°; greatest daily range, 27°, on the 19th; least daily, 6°, on the 4th. The mean temperature of the month was 28°.1.

EDGAR COUNTY—WILBUR T. COOK, Observer, Paris. Highest temperature, 65°, on the 30th; lowest, 8°, on the 22nd; range, 57°. The mean temperature of the month, 34°. The precipitation, 3.52 inches, falling on nine days, viz: 5th, 10th, 13th, 16th, 19th, 20th, 21st, 25th and 26th. Prevailing direction of the wind, N. & N.W. There were 9 clear, 8 fair and 14 cloudy days. Total snowfall, 2.2 inches, of which none remained on the ground at the end of the month.

EDWARDS COUNTY—B. F. MICHELS, Observer, Albion. Highest temperature, 66°, on the 18th and 31st; lowest, 15°, on the 22d; range, 51°; greatest daily range, 30°, on the 30th; least daily, 3°, on the 6th and 25th; mean daily range, 14°.5. The mean temperature of the month was 39°.4. The precipitation was 5.33 inches, falling on seven days, viz: 1st, 10th, 16th, 19th, 20th, 24th and 25th. Prevailing direction of the wind, S.; maximum velocity, 3 on a scale of 10 from the N.W., on the 22d. There were 12 clear, 3 fair and 16 cloudy days. Total snowfall, 1½ inches, of which none remained on the ground at the end of the month. Thunderstorms on the 10th, 16th and 20th. Parhelion on the 12th. Wild geese going N.E., on the 12th.

EFFINGHAM COUNTY—GEO. STRONG, Observer, Eberle. Highest temperature, 70°, on the 30th; lowest, 10°, on the 3d; range, 60°. The mean temperature of the

month was 35°. The precipitation was 3.33 inches, falling on seven days, viz: 1st, 2d, 5th, 11th, 18th, 23d and 27th. Prevailing direction of the wind, N. & N.W. There were 8 clear, 10 fair and 13 cloudy days. Total snowfall, 0.5 of an inch, of which none remained on the ground at the end of the month. Thunderstorm on the 6th.

FAYETTE COUNTY—JOS. URBANI, Observer, Vandalia. Highest barometer, 30.55 on the 3d; lowest, 29.64 on the 26th; mean, 30.09; range, 0.91. Highest temperature, 68°, on the 18th; lowest, 14°, on the 22d; range, 54°; greatest daily range, 35°, on the 18th; least, 2°, on the 16th; mean daily range, 15°; mean maximum temperature, 45°.25; mean minimum, 30°.35. The mean temperature of the month was 38°.75. The precipitation was 2.32 inches, falling on nine days, viz: 1st, 2d, 9th, 10th, 16th, 19th, 20th, 24th and 25th. Prevailing direction of the wind, N.E. There were 9 clear, 7 fair and 15 cloudy days. Total snowfall, 1 inch, of which none remained on the ground at the end of the month. Thunderstorm and hail on the 10th. Fog on the 17th.

FRANKLIN COUNTY—J. MCPHERSON, Observer, Benton. Highest temperature, 76°, on the 31st; lowest, 19°, on the 22nd; range 57°. The mean temperature of the month, 43°.8. The precipitation, was 2.86 inches, falling on 9 days, viz: 1st, 10th, 16th, 19th, 20th, 24th, 25th, 26th and 27th. Prevailing direction of the wind, S.W. There were 8 clear, 9 fair and 14 cloudy days. Total snowfall, 0.25 inch, of which none remained on the ground at the end of the month.

FULTON COUNTY—MISS MARY C. BENNETT, Observer, Fairview. Highest temperature, 55°, on the 19th and 31st; lowest, zero, on the 22d; range, 55°. The precipitation was 4.04 inches, falling on six days, viz: 2d, 9th, 16th, 19th, 20th and 24th. Prevailing direction of the wind, S. & S.W.; maximum velocity, 40 miles from the N.W., on the 21st. There were 13 clear, 4 fair and 14 cloudy days. Total snowfall, 1.6 inches, of which none remained on the ground at the end of the month. Lunar halo on the 21st. Thunderstorm on the 26th. Frost on the 3d, 6th, 7th, 8th, 12th, 13th, 14th, 15th and 29th. Frogs piping on the 19th. Wild geese flying north on the 1st. Blue-birds and robins appeared on the 16th. Stock looks generally healthy, though quite thin. Wheat damaged by late freezing.

GREENE COUNTY—P. J. BATES, Observer, White Hall. Highest temperature, 68°, on the 30th; lowest, 10°, on the 22nd; range, 58°; greatest daily range, 28°, on the 23rd; least, 2°, on the 18th and 19th. The mean temperature of the month, 38°.2. The precipitation, 8.35 inches, falling on twelve days, viz: 1st, 2nd, 4th, 9th, 10th, 15th, 19th, 20th, 23rd, 24th, 26th and 28th. Prevailing direction of the wind, N.W. & N.E. There were 13 clear, 3 fair and 15 cloudy days. Total snowfall, 4 inches, of which none remained on the ground at the end of the month.

GRUNDY COUNTY—GEO. W. BARTLETT, Observer, Morris. Highest temperature, 58°, on the 30th; lowest 3.0°, on the 22nd; range, 55°.0; greatest daily range, 28°, on the 2d. Prevailing direction of the wind, W. There were 11 clear, 7 fair and 13 cloudy days.

HAMILTON COUNTY—W. P. GIBBS, Observer, McLeansboro. Highest temperature; 72° , on the 30th and 34th; lowest, 16° , on the 22d; range, 56° ; greatest daily range, 35° , on the 18th; least daily, 2° , on the 4th. The mean temperature of the month, $41^{\circ} 4$, was $0^{\circ} 2$ below the normal for the past five years. The precipitation, 4.77 inches, was 1.98 inches above the normal for the past five years, falling on ten days, viz: 2d, 4th, 5th, 10th, 16th, 19th, 20th, 24th, 24th and 27th. Prevailing direction of the wind, N. W. There were 9 clear, 10 fair and 12 cloudy days. Total snowfall, 1.5 inches, of which none remained on the ground at the end of the month. Thunderstorms on the 10th and 20th.

HANCOCK COUNTY—FRED Z. GOSEWISCH, Observer, Signal Corps, Keokuk, Iowa. Highest barometer, 30.540, on the 3d; lowest, 29.430, on the 19th; mean, 30.066; range, 1.110. Highest temperature, $69^{\circ} 8$, on the 18th; lowest, $5^{\circ} 0$, on the 22d; range, $64^{\circ} 8$; greatest daily range, $37^{\circ} 8$, on the 18th; least daily, $5^{\circ} 4$, on the 25th; mean daily range, $19^{\circ} 0$; mean maximum temperature, $44^{\circ} 6$; mean minimum, $25^{\circ} 6$. The mean temperature of the month, $34^{\circ} 2$, was $3^{\circ} 6$ below the normal for the past sixteen years. The precipitation, 3.45 inches, was 1.27 inches above the normal for the past sixteen years, falling on eleven days, viz: 1st, 2d, 4th, 5th, 9th, 10th, 19th, 20th, 24th, 25th and 26th. Mean relative humidity, 70.6 per cent. Prevailing direction of the wind, N. W.; total movement, 8.817 miles; maximum velocity, 36 miles from the N. W., on the 21st. There were 10 clear, 13 fair and 8 cloudy days. Thunderstorm on the 25th. The mean temperature for March has only been lower three times since 1872—in 1875, when it was $33^{\circ} 8$; in 1877, when it was $32^{\circ} 6$, and in 1881, when it was $33^{\circ} 7$. The rainfall has been only twice larger in sixteen years, in 1877 and 1878, when it was 3.76 and 3.78 inches respectively.

HENDERSON COUNTY—R. HODSON, Observer, Oquawka. Highest temperature, 62° , on the 18th; lowest, zero, on the 22d; range, 62° . The mean temperature of the month, $31^{\circ} 2$. The precipitation, 3.20 inches, falling on 7 days, viz: 1st, 10th, 19th, 20th, 23d, 25th and 29th. Prevailing direction of the wind, W. There were 11 clear, 9 fair and 11 cloudy days. Total snowfall, 3.0 inches, of which none remained on the ground at the end of the month.

IROQUOIS COUNTY—H. UPSALL, Observer, Wataeka. Highest barometer, 30.563, on the 12th; lowest, 29.554, on the 19th; mean 30.134; range, 1.009. Highest temperature, $64^{\circ} 0$ on the 30th; lowest, $2^{\circ} 0$ on the 22d; range, 62° ; greatest daily range, $30^{\circ} 5$, on the 30th; least, $5^{\circ} 0$, on the 27th; mean daily range, $16^{\circ} 4$; mean maximum temperature, $40^{\circ} 4$; mean minimum, $24^{\circ} 0$. The mean temperature of the month, $32^{\circ} 2$, was $2^{\circ} 2$ below the mean of the past three Marches, falling on eight days, viz: 2d, 9th, 10th, 16th, 19th, 23d, 26th and 28th. Mean relative humidity, 82 per cent. Prevailing direction of the wind, N. W.; total movement, 8.626 miles; maximum velocity, 28 miles, from the N. W., on the 21st. There were 14 clear, 3 fair and 14 cloudy days. Total snowfall, 1.50 inches, of which none remained on the ground at the end of the month. Solar halos on the 12th, 29th and 31st. Robins appeared on the 15th. Spring very backward; at least three weeks later than 1886 and 1887.

KANE COUNTY—M. M. ROBBINS, Observer, Aurora. Highest barometer, 30.454, on the 3rd; lowest, 29.420, on the 19th; mean, 30.021; range, 1.034. Highest temperature, 57° , on the 30th; lowest, zero, on 22nd; range, 57° ; greatest daily range, $31^{\circ} 6$ on the 15th; least, 2° , on the 20th; mean daily range, 14° ; mean maximum temperature, 37° ; mean minimum, 23° . The mean temperature of the month, $28^{\circ} 96$, was below the normal for the past nine years. The precipitation, 3.19 inches, was 1.02 inch above the normal for the past nine years, falling on twelve days, viz: 1st, 2nd, 4th, 9th, 10th, 17th, 19th, 20th, 23rd, 25th, 26th and 28th. Mean relative humidity, 83 per cent. Prevailing direction of the wind W; maximum velocity, 30 miles from the W, on the 21st. There were 7 clear, 14 fair and 10 cloudy days. Total snowfall, 3.4 inches, of which none remained on the ground at the end of the month. Solar halo on the 22nd.

KENDALL COUNTY—J. S. SEELY, Observer, Oswego. Highest barometer, 30.561, or the 3d; lowest, 29.397, on the 21st; mean, 30.177; range, 1.173. Highest temperature, 56° , on the 30th; lowest, zero, on the 22d; range, 56° ; greatest daily range, 28° , on the 15th; least daily, 3° , on the 20th. The mean temperature of the month was $28^{\circ} 2$, a fraction above the normal for the past eight years. The precipitation, 2.77 inches, was 0.90 of an inch above the normal for the past eight years, falling on nine days, viz: 1st, 9th, 10th, 17th, 19th, 20th, 23d, 25th and 26th. Prevailing direction of the wind, N.E. & N. W. There were 12 clear, 5 fair and 14 cloudy days. Total snowfall, 2.25 inches, of which none remained on the ground at the end of the month. The freezing and thawing has been quite injurious to grain and crops, the ground was so much frozen that the precipitation of the 25th and 26th largely ran into the streams; the frost has come out rapidly the last two days. Roads are very muddy.

KNOX COUNTY—T. A. WETMORE, Observer, Oueida. Highest temperature, 60° , on the 18th; lowest, $2^{\circ} 0$, on the 22d; range, 58° ; greatest daily range, 30° , on the 18th; least, 6° , on the 9th. The mean temperature of the month, $30^{\circ} 9$, was $2^{\circ} 6$ below the mean of the past three years. The precipitation, 3.75 inches, was 1.77 inches above the mean of the past three years, falling on ten days, viz: 2d, 5th, 9th, 10th, 16th, 19th, 20th, 23d, 25th and 26th. Prevailing direction of the wind, W. There were 9 clear, 6 fair and 16 cloudy days. Total snowfall, 4.0 inches of which none remained on the ground at the end of the month. Solar halos on the 20th. Thunderstorms on the 19th and 26th. Frost on the 3d, 6th, 7th, 12th, 14th, 15th, 17th, 18th, 29th, 30th and 31st.

LAKE COUNTY—L. R. F. GRIFFIN, Observer, Lake Forest. Highest barometer, 30.473, on the 28th; lowest, 29.408, on the 20th; mean, 30.013; range, 1.065. Highest temperature, 55° , on the 19th and 30th; lowest, 0° , on the 22nd; range, 55° ; greatest daily range, $27^{\circ} 5$, on the 6th; least, 5° , on the 1st; mean daily range, $17^{\circ} 4$; mean maximum temperature, $36^{\circ} 7$; mean minimum, $19^{\circ} 3$. The mean temperature of the month, $28^{\circ} 7$, was above that of the past year. The precipitation, 3.58 inches, was 1.52 inch above that of the past year, falling on eight days, viz: 1st, 4th, 5th, 11th, 20th, 24th, 26th and 27th. Mean relative humidity, 729 per cent. Prevailing direction of the wind, N.E. There were 1 clear, 12 fair,

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and 18 cloudy days. Total snowfall, 8 inches, of which none remained on the ground at the end of the month.

LASALLE COUNTY—J. O. HARRIS, Observer, Ottawa. Highest temperature, 60°, on the 1st and 30th; lowest, -2.0 on the 22d; range, 62°; greatest daily range, 27°, on the 8th; least, 6°, on the 9th; mean daily range, 14°; mean maximum temperature, 33°.8; mean minimum, 24°.6. The mean temperature of the month was 29°.4. The precipitation was 3.70 inches, falling on six days, viz: 1st, 9th, 19th, 23d, 25th and 28th. Prevailing direction of the wind, N. There were 8 clear, 7 fair and 16 cloudy days. Total snowfall, 1.5 inches, of which none remained on the ground at the end of the month. Thunderstorm on the 26th. Robins were seen on the 25th.

LAWRENCE COUNTY—J. A. FYFFE, Observer, Sumner. Highest temperature, 72°, on the 30th; lowest, 14°, on the 22d; range, 58°; mean temperature of the month, 39°.5, was 4°.5 below the mean of the past two years. The precipitation, 4.80 inches, was 0.10 of an inch above the mean of the past two years, falling on eight days, viz: snow on the 5th, rain on the 1st, 10th, 16th, 20th, 24th, 25th, 26th and 28th. There were 14 clear, 8 fair and 9 cloudy days. Total snowfall, .30 of an inch, of which none remained on the ground at the end of the month. Frost on the 7th, 8th, 15th and 29th.

LEE COUNTY—MATTHIAS SCHICK, Observer, Prairieville. Highest barometer, 30.300, on the 3d and 12th; lowest, 29.350, on the 19th; mean, 29.90; range, 0.950. Highest temperature, 54°.0, on the 18th; lowest zero, on the 22d; range, 54°.0; greatest daily range, 22°, on the 18th; least daily, 2°, on the 27th; mean daily range, 12°.1; mean maximum temperature, 34°.21; mean minimum, 22°.1. The mean temperature of the month, 29°.16, was 3°.13 below the normal for the past nine years. The precipitation, 3.93 inches, was 1.89 inches above the normal for the past eight years, falling on eight days, viz: 1st, 4th, 9th, 10th, 19th, 20th, 25th and 26th. Mean relative humidity, 76.18 per cent. Prevailing direction of the wind, W.; total movement, 9,236 miles; maximum velocity, 50 miles from the W., on the 21st. There were 9 clear, 4 fair and 18 cloudy days. Total snowfall, 5.25 inches, of which trace of drifts remained on the ground at the end of the month. Solar halos on the 18th and 22d. Parhelia on the 29th. Double rainbow on the 19th. Dense fog on the 1st.

LOGAN COUNTY—L. H. SULLIVAN, Observer, Beason. Highest temperature, 62°, on the 30th and 31st; lowest, 8°, on the 22d; range, 54°. The mean temperature of the month was 34°.9+. The precipitation was 3.41 inches, falling on twelve days, viz: 1st, 9th, 10th, 18th, 19th, 20th, 23d, 24th, 25th, 28th, 27th and 28th. Prevailing direction of the wind, N.W. There were 14 clear, 5 fair and 12 cloudy days. Total snowfall, 2.6 inches, of which none remained on the ground at the end of the month. Solar halos on the 29th and 31st; lunar, on the 22d. Thunderstorm on the 28th, coming from E. going W. Sleet on the 24th, commencing at 12:15 p.m. and continuing until the morning of the 25th, when it began to melt and fall off; a very light breeze at the time, so no damage was done to trees.

MADISON COUNTY—DR. J. L. WADSWORTH, Observer, Collinsville. Highest temperature, 73°.5, on the 30th; lowest, 13°, on the 22d; range, 60°.5; greatest daily range, 33°.5, on the 30th; least daily, 5°.5, on the 4th; mean daily range, 17°.2; mean maximum temperature, 47°.0; mean minimum, 29°.8. The mean temperature of the month, 38°.4, was 3°.4 below the normal for the past eight years. The precipitation, 3.72 inches, was 1.30 inches above the normal for the past five years, falling on eleven days, viz: 1st, 4th, 5th, 9th, 10th, 16th, 19th, 20th, 21st, 25th and 26th. Prevailing direction of the wind, S. There were 10 clear, 5 fair and 15 cloudy days.

MARION COUNTY—J. L. HALLAM, Observer, Centralia. Highest temperature, 74°, on the 31st; lowest, 14°, on the 22nd; range, 60°; greatest daily range, 27°, on the 15th; least daily, 4°, on the 4th and 5th. The mean temperature of the month, 41°. The precipitation, 2.17 inches, falling on four days, viz: 10th, 16th, 20th and 24th. Prevailing direction of the wind, N.W.; mean maximum velocity, 30 miles per hour on the 21st and 22nd. There were 11 clear, 6 fair and 14 cloudy days. Thunderstorms on the 10th and 16th. Frost on the 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 21st, 22nd, 23rd, 28th and 29th.

MARSHALL COUNTY—REV. A. C. PRICE, Observer, Lacon. Highest barometer, 30.22, on the 3d; lowest, 29.01, on the 20th; mean, 29.723; range, 1.21. Highest temperature, 64°, on the 30th; lowest, 2°, on the 22d; range, 62°; greatest daily range, 33°, on the 18th; least daily, 4°, on the 26th; mean daily range, 16°. The mean temperature of the month was 33°.1. The precipitation was 4.60 inches, falling on twelve days, viz: 1st, 2d, 9th, 10th, 13th, 16th, 19th, 20th, 23d, 25th, 26th and 28th. Prevailing direction of the wind, N.E. & N.W. There were 13 clear, 5 fair and 13 cloudy days. Total snowfall, 1.57 inches, of which none remained on the ground at the end of the month. Lunar halos on the 17th and 18th. Thunderstorms on the 26th. Frost on the 8th, 7th, 15th, 29th and 31st. Distant lightning on the 18th. The Illinois river opened on the 17th. Boats began trips on the 19th. Robins appeared on the 18th and swallows on the 22d. Sleet on the 16th and 25th. Smoke and fog on the 26th. Frost in the ground in all places protected from the direct rays of the sun.

MCHENRY COUNTY—GEO. D. SILLIMAN, Observer, Woodstock. Highest temperature 57°, on the 19th; lowest, 3°, on the 22nd; range, 60°; greatest daily range, 27°, on the 21st; least daily, 3°, on the 24th; mean daily, 13°.5; mean maximum, 33°.7; mean minimum temperature, 20°.2; mean temperature of the month, 26°.2, which was 2°.2 below the normal for the past three Marches. The precipitation, 3.23 inches, was .59 of an inch above the normal for the past 3 Marches, falling on ten days, viz: 1st, 2nd, 9th, 10th, 17th, 19th, 20th, 23rd, 25th and 26th. There were 9 clear, 11 fair and 11 cloudy days. Solar halos on the 8th and 24th. Lunar halo on the 24th.

MCHENRY COUNTY—JOHN W. JAMES, Observer, Riley. Highest temperature, 55°.7, on the 19th; lowest, -2°.3, on the 22d; range, 58°.0; greatest daily range, 24°.4, on the 15th; least daily, 1°.7, on the 20th. The mean temperature of the month, 26°.1, was 3°.7 below the normal for the past twenty-seven years.

The precipitation, 2.34 inches, was 0.11 of an inch below the normal for the past twenty-seven years, falling on thirteen days, viz: 1st, 2d, 3d, 4th, 9th, 10th, 17th, 19th, 20th, 23d, 24th, 25th and 26th. Prevailing direction of the wind, N.W. There were 9 clear, 9 fair and 13 cloudy days. Total snowfall, 3 inches, of which none remained on the ground at the end of the month. Solar halos on the 5th, 7th, 8th, 12th, 15th, 16th, 24th, 29th and 30th. Lunar halos on the 20th and 24th. Blue-birds, robins, meadow-larks and red winged black-birds came on the 18th. Wild geese seen flying south on the 19th. March, 1878, was the warmest, 41°.7; March, 1877, was the coldest, 21°.7; March, 1877, was the wettest, 6.50 inches; March, 1885, was the driest, 0.89 of an inch. Only Marches 1887, 1872, 1877 and 1885, were colder than this one.

MERCER COUNTY—TYLER MCWHORTER, Observer, Aledo. Highest temperature, 59°, on the 18th; lowest, zero, on the 22d; range, 59°; greatest daily range, 27°, on the 18th; least, 2°, on the 28th. The mean temperature of the month was 32°.5. The precipitation, 2.81 inches, falling on ten days, viz: 1st, 2nd, 9th, 10th, 19th, 20th, 23rd, 24th, 25th and 26th. Prevailing direction of the wind, N.W. There were 7 clear, 11 fair and 13 cloudy days.

MORGAN COUNTY—P. J. HASENSTAB, Observer, Institute for the Deaf, Jacksonville. Highest barometer, 30.516 on the 3rd; lowest, 29.466 on the 19th; mean, 30.058; range, 1.050. Highest temperature, 65°.2, on the 30th; lowest, 7°.8, on the 22nd; range, 57°.4; greatest daily range, 32°.6, on the 23rd; least, 1°.3, on the 21st; mean daily range, 15°.3; mean maximum temperature, 43°.6; mean minimum, 28°.1. The mean temperature of the month, 36°.1, was 2°.5 less than that of last year. The precipitation, 2.235 inches, was 1.03 inch more than that of last year, falling on eleven days, viz: 4th, 5th, 9th, 10th, 16th, 19th, 20th, 23rd, 24th, 25th and 27th. Mean relative humidity, 81 per cent. Prevailing direction of the wind, West; total movement, 7821 miles; maximum velocity, 32 miles from the west, on the 21st. There were 11 clear, 7 fair and 13 cloudy days. Total snowfall, 2.5 inches, of which none remained on the ground at the end of the month. Solar halos on the 7th, 8th, 18th and 21st. Parhelia on the 7th; paraseleene on the 21st. Thunderstorm on the 23rd, in the West. Frost on the 3rd, 7th, 8th, 11th, 12th, 13th, 14th, 17th, 18th and 20th. Blue-birds and robins appeared first about the 9th. Woodpeckers a few days later. Mosquitoes and moths about the 29th. Wild ducks flying west on the 12th; east on the 16th; southeast on the 29th; northeast on the 28th. Wild geese flying east on the 13th, 14th, 16th, 24th; north on the 24th and 26th; west on the 27th and 31st. Maple trees budding about the middle of the month; grass appeared a little green at about the same time; elm trees budding several days before the close of the month. On the 24th, it was sleeting more or less all the afternoon and night; in the morning trees and other out-door objects were covered with ice $\frac{1}{4}$ of an inch thick; a great many shade trees were injured, branches breaking down under the weight of the ice. Fog set in at noon and lasted till 9 a.m. the next day.

OGLE COUNTY—WM. FEARY, Observer, Mt. Morris. Highest temperature, 60°, on the 19th; lowest, zero, on the 22d; range, 60°; greatest daily range, 26°, on the 8th; least daily, 4°, on the 1st; mean daily range, 16°; mean maximum temperature, 36°.2; mean minimum, 20°.2. The mean tempera-

ture of the month, 28°.2, was 1° below that of March last year. Rain fell on four days, viz: 9th, 10th, 19th and 26th. Prevailing direction of the wind, N.W. & S.E.; maximum velocity, gale from the N.W., on the 21st. There were 12 clear, 6 fair and 13 cloudy days. Total snowfall, 5 $\frac{1}{2}$ inches, of which traces remained on the ground at the end of the month. Solar halos on the 24th and 29th. Lunar halos on the 20th and 24th. Fog on the 1st. Sleet on the 25th.

PEORIA COUNTY—DR. FRED BRENDL, Observer, Peoria. Highest barometer, 30.136, on the 3d; lowest, 29.068, on the 19th; mean, 29.662; range, 1.068. Highest temperature, 68°, on the 30th; lowest, 7°, on the 22d; range, 61°; greatest daily range, 30°.5, on the 18th; least daily, 5°, on the 26th; mean daily range, 15°.8; mean maximum temperature, 44°.0; mean minimum, 28°.2. The mean temperature of the month, 37°.1, was 1°.1 above the normal for the past thirty-two years. The precipitation, 4.03 inches, was 1.37 inches above the normal for the past thirty-two years, falling on seven days, viz: 1st, 9th, 10th, 16th, 19th, 23d and 25th. Mean relative humidity, 67 per cent. Prevailing direction of the wind, S. There were 10 clear, 9 fair and 12 cloudy days. Total snowfall, 0.5 of an inch, of which none remained on the ground at the end of the month. Thunderstorms on the 26th. Frost on the 2d, 3d, 4th, 5th, 6th, 7th, 8th, 10th, 11th, 12th, 13th, 14th, 21st, 22d, 23d, 24th, 25th, 27th and 28th.

PERRY COUNTY—J. A. ANDERSON, Observer, Three Mile. Highest temperature, 74°, on the 31st; lowest, 14°, on the 22nd; range, 60°. The mean temperature of the month, 37°.5. The precipitation, 6.10 inches, falling on seven days, viz: 9th, 10th, 16th, 19th, 20th, 25th and 26th. Prevailing direction of the wind, S.E. There were 10 clear, 9 fair and 12 cloudy days. Total snowfall, 2 inches, of which none remained on the ground at the end of the month. Frosts on the 3rd, 4th, 5th, 6th, 7th, 8th, 11th, 12th, 13th, 14th, 15th, 22nd, 23rd and 29th.

PIKE COUNTY—M. J. HASSELER, Observer, Louisiana, Mo. Highest temperature, 73°, on the 18th; lowest, 9°.0, on the 6th; range, 64°; greatest daily range, 39°, on the 17th and 23d; least daily, 1°.0 on the 2d; mean daily range, 20°.1; mean maximum temperature, 49°.3; mean minimum, 29°.1. The mean temperature of the month was 35°.8. The precipitation was 4.63 inches, falling on nine days, viz: 1st, 2d, 5th, 10th, 16th, 19th, 23d, 26th and 27th. Prevailing direction of the wind, N.W. There were 16 clear, 3 fair and 12 cloudy days. Total snowfall, 5.0 inches, of which none remained on the ground at the end of the month. Thunderstorm on the 25th.

PIKE COUNTY—L. EASTMAN, Observer, Griggsville. Highest barometer, 30.88, on the 11th; lowest, 29.65, on the 20th; mean, 29.969; range, .73. Highest temperature, 67°, on the 18th; lowest, 8°, on the 6th, 7th and 22d; range, 59°; greatest daily range, 33°, on the 18th; least, 1°, on the 24th. The mean temperature of the month was 34°.5. The precipitation was 3.84 inches, falling on ten days, viz: 1st, 4th, 9th, 10th, 14th, 19th, 20th, 24th, 25th and 27th. Prevailing direction of the wind, S.W. There were 9 clear, 8 fair and 17 cloudy days. Total snowfall, 4.75 inches, of which none remained on the ground at

the end of the month. Thunderstorms on the 1st and 26th. On the 24th it rained moderately all day and night and froze as it fell. Trees much broken.

POPE COUNTY—J. E. Y. HANNA, Observer, Golconda. Highest temperature, 78°, on the 31st; lowest, 20°, on the 22d; range, 58°; greatest daily range, 30°, on the 10th and 30th; least daily, 2°, on the 4th, 5th, 19th, 27th and 28th; mean daily, 14°.5. The mean temperature of the month, 43°.4, was 2°.2 below the normal for the past ten years. The precipitation, 6.59 inches, was 3.31 inches above the normal for the past ten years, falling on eleven days, viz: 2d, 4th, 5th, 10th, 19th, 20th, 24th, 22th, 26th, 27th and 28th. There were 12 clear, 5 fair and 14 cloudy days. Total snowfall, 0.5 of an inch, of which none remained on the ground at the end of the month. Frost on seven days, the 8th, 14th, 15th, 18th, 22d, 23d and 29th. Thunderstorms on the 10th and 20th. Gale from N.W. with hail, p.m. of the 10th. Martins appeared on the 30th.

PUTNAM COUNTY—A. T. PURVIANCE, Observer, Hennepin. Highest temperature, 63°, on the 31st; lowest, 2°, on the 22d and 23d; range, 61°; greatest daily range, 35°, on the 31st; least daily, 6°, on the 4th; mean daily range, 20°.1; mean maximum temperature, 41°.1; mean minimum, 21°.0. The mean temperature of the month was 31°.0. The precipitation was 2.54 inches, falling on five days, viz: 2d, 10th, 20th, 26th and 27th. Prevailing direction of the wind, S.W. There were 13 clear, 3 fair and 15 cloudy days. Total snowfall, 1 inch, of which none remained on the ground at the end of the month.

RANDOLPH COUNTY—W. J. S. CATHCART, Observer, Jordan's Grove. Highest temperature, 76°, on the 30th; lowest, 16°, on the 22d; range, 54°; greatest daily range, 37°, on the 30th; least, 2°, on the 24th; mean daily range, 16°.7; mean maximum temperature, 51°.3; mean minimum, 32°.9. The mean temperature of the month, 41°.2, was below that of the past year. The precipitation, 5.185 inches, was 2.735 inches above that of the past year, falling on twelve days, viz: 1st, 2d, 5th, 6th, 9th, 10th, 16th, 19th, 20th, 24th, 25th and 27th. Prevailing direction of the wind, N.E.; maximum velocity strong from the N.W., on the 2d. There were 11 clear, 5 fair and 15 cloudy days. Total snowfall, 3.39 inches, of which none remained on the ground at the end of the month. Solar halo on the evening of the 12th. Thunderstorms on the 10th and 25th. The month began with rain in the morning, mercury at 47°; on the 2d the mercury fell from 58° at 7 a.m. to 30° at 9 p.m.; red sunset on the 2d and 7th; red sunrise on the 16th. The first blackbird appeared on the 12th. The ground was frozen 2.25 inches in depth on the 22d. 3.13 inches of rain fell between 5 a.m. of the 24th and 9 a.m. of the 25th. Very few acres of oats sown yet; the ground has been too wet for plowing. Oats were nearly all sown in March last year; this year almost none sown in this vicinity. The ground is still too wet to plow, but farmers are beginning to plow. A great deal of ground will be plowed too wet. In the report for February I was made to say that the lowest temperature was -25°. There should be a decimal point between the 2 and the 5.

RICHLAND COUNTY—CHAS. FAHS, Observer, Olney. Highest temperature, 65°, on

the 30th; lowest, 14°, on the 22nd; range, 51°; greatest daily range, 23°, on the 2nd, 10th and 15th; least, 4°, on the 4th and 27th; mean daily range, 15°. The mean temperature of the month, 39°. The precipitation, 5.25 inches, falling on nine days, viz: 9th, 10th, 19th, 21st, 22nd, 24th, 25th, 26th and 28th. Prevailing direction of the wind, S.E. There were 12 clear, 9 fair and 10 cloudy days. Total snowfall, 1 inch, of which none remained on the ground at the end of the month. Lunar halo on 28th. Thunderstorm on the 19th. Frosts on the 7th, 8th, 15th, 17 and 29th.

ROCK ISLAND COUNTY, F. J. WALZ, Observer, Davenport. Highest barometer, 30.580 on the 3d; lowest, 29.400, on the 19th; mean, 30.091; range, 1.160. Highest temperature, 61°, on the 18th; lowest, -0.5, on the 22d; range, 61°.5; greatest daily range, 35°.3, on the 2d; least, 4°.8, on the 4th; mean daily range, 16°.3; mean maximum temperature, 38°.4; mean minimum, 22°.1. The mean temperature of the month, 30°.1, was 4°.9 below the normal for the past sixteen years. The precipitation, 2.70 inches, was 0.53 of an inch above the normal for the past sixteen years, falling on eleven days, viz: 1st, 2d, 4th, 5th, 9th, 10th, 19th, 20th, 23d, 25th and 26th. Mean relative humidity, 74.0 per cent. Prevailing direction of the wind, N.W.; total movement, 7537 miles; maximum velocity, 48 miles from the W. & N.W., on the 21st. There were 9 clear, 12 fair and 10 cloudy days. Only once in sixteen years has the mean temperature of March been lower than this one—in 1881, when it was 28°.8.

SALINE COUNTY—GRIGGS & GRACE, Observers, Harrisburg. Highest temperature, 77°, on the 31st; lowest, 18°, on the 22nd; range 59°; greatest daily range, 37°.2, on the 18th; least, 4°.5, on the 4th; mean daily range, 18°.5; mean maximum temperature, 53°.1; mean minimum, 34°.6. The mean temperature of the month, 43°.8. The precipitation, 4.80 inches, falling on 8 days, viz: 2nd, 4th, 10th, 19th, 20th, 24th, 25th and 28th. Prevailing direction of the wind, N.W. There were 8 clear, 11 fair and 12 cloudy days. Total snowfall, 2.0 inches, of which none remained on the ground at the end of the month.

SANGAMON COUNTY—JOHN CRAIG, Observer Signal Corps, Springfield. Highest barometer 30.580, on the 3d; lowest, 29.520, on the 19th; mean, 30.124; range, 1.060. Highest temperature, 66°.2, on the 30th; lowest, 6°.0, on the 22d; range, 60°.2; greatest daily range, 32°.8, on the 23d; least daily, 7°.0, on the 24th; mean daily range, 18°.5; mean maximum temperature, 45°.0; mean minimum, 26°.5. The mean temperature of the month, 35°.4, was 4°.4 below the normal for the past eight years. The precipitation, 3.48 inches, was 0.88 of an inch above the normal for the past eight years, falling on twelve days, viz: 1st, 2d, 5th, 9th, 10th, 16th, 19th, 20th, 24th, 25th, 26th and 28th. Mean relative humidity, 72.5 per cent. Prevailing direction of the wind, S.; total movement, 7,420 miles; maximum velocity, 28 miles from the W. & N.W., on the 21st. There were 9 clear, 10 fair and 12 cloudy days. Total snowfall, 2.5 inches, of which none remained on the ground at the end of the month. Solar halos on the 1st, 7th, 8th, 18th, 21st, 29th and 31st. Lunar halo on the 28th. Frost on the 3d, 4th, 5th, 7th, 11th, 12th, 13th, 14th, 15th, 17th, 18th, 21st, 22d, 23d and 29th. The mean temperature for March was the lowest in the last eight years.

SHELBY COUNTY—A. H. HATCH, Observer, Windsor. Highest barometer, 30.614, on the 12th; lowest, 29.516, on the 20th; mean, 29.169; range, 1.098. Highest temperature, 68° 2, on the 20th; lowest, 8° 2, on the 22d; range, 60° 0; greatest daily range, 31° 5, on the 30th; least daily, 8° 1, on the 27th; mean daily range, 18° 2; mean maximum temperature, 44° 6; mean minimum, 26° 4. The mean temperature of the month, 36° 2, was 2° 1 below the normal for the past three years. The precipitation, 3.37 inches, was 0.74 of an inch above the normal for the past three years, falling on fourteen days, viz: 1st, 2d, 4th, 5th, 9th, 10th, 16th, 19th, 20th, 21st, 24th, 25th, 26th and 27th. Mean relative humidity, 87.3 per cent. Prevailing direction of the wind, S.E.; total movement, 7,827 miles; maximum velocity, 32 miles from the S.E., on the 22d. There were 8 clear, 7 fair and 16 cloudy days. Total snowfall, 2.60 inches, of which none remained on the ground at the end of the month. Thunderstorm on the 10th, light. The sleet of the 24th was the heaviest for several years. The cold wave of the 22d was severe on all kinds of vegetation.

ST. CLAIR COUNTY—DR. G. LEIBROCK, Observer, Mascoutah. Highest temperature, 84°, on the 31st; lowest, 12°, on the 22nd; range, 72°. The precipitation, 3.80 inches, falling on seven days, viz: 2nd, 5th, 10th, 16th, 20th, 25th and 26th. Total snowfall, 1.8 inches of which none remained on the ground at the end of the month. Thunderstorms on the 10th, 16th and 24th.

ST. CLAIR COUNTY—V. P. CHAPPEL, Observer, Signal Corps, St Louis, Mo. Highest barometer, 30.550, on the 11th; lowest, 29.510, on the 19th; mean, 30.102; range, 1.040. Highest temperature, 76° 0, on the 30th; lowest, 14° 0, on the 22d; range, 62°; greatest daily range, 35° 5, on the 23d; least daily, 8° 1, on the 21st; mean daily range, 17° 7. mean maximum temperature, 48° 8; mean minimum, 31° 1. The mean temperature of the month, 40° 8, was 2° 3 below the normal for the past sixteen years. The precipitation, 3.79 inches, was 0.92 of an inch above the normal for the past sixteen years, falling on ten days, viz: 1st, 4th, 9th, 10th, 20th, 24th, 25th and 26th. Mean relative humidity, 70.8 per cent. Prevailing direction of the wind, N.; total movement, 9,633 miles; maximum velocity, 48 miles from the W., on the 20th. There were 11 clear, 6 fair and 14 cloudy days.

STEPHENSON COUNTY—JOHN WRIGHT, Observer, Cedarville. Highest temperature, 52°, on the 18th; lowest, -5° 0, on the 22d; range, 57°. The mean temperature of the month, 25° 6, was 4° below the mean for the two previous years. The precipitation, 4.65 inches, was 1.90 inches above the mean for the two previous years, falling on seven days, viz: 2d, 3d, 10th, 19th, 20th, 25th and 28th. Prevailing direction of the wind, N.W. There were 9 clear, 10 fair and 12 cloudy days. Total snowfall, 2 inches, of which none remained on the ground at the end of the month. Solar halo on the 22d. Hail on the 25th. The 21st was the stormiest day this winter, the thermometer in the morning was 20° and held just at that until 3 p.m., after which it fell rapidly, and before 9 p.m. was down to 2°, while the wind was filled with frozen particles and blew furiously from the N.W.

TAZEWELL COUNTY—REV. J. E. TEBBEG, Observer, Pekin. Highest barometer, 30.743, on the 12th; lowest, 29.575, on the 19th; mean, 30.241; range, 1.168. Highest temperature, 67°, on the 13th; lowest, 5°, on the 22d; range, 62°; greatest daily range, 37°, on the 18th; least, 7°, on the 28th; mean daily range, 18° 5; mean maximum temperature, 43°; mean minimum, 24° 5. The mean temperature of the month, 35° 1, was 6° 9 inches below the normal for the past three years. The precipitation, 5.29 inches, was 3.72 inches above the normal for the past six years, falling on ten days, viz: 1st, 2d, 9th, 10th, 16th, 19th, 20th, 25th, 26th and 28th. Mean relative humidity, 79.1 per cent. Prevailing direction of the wind, N.W.; maximum velocity, 40 miles from the N.W., on the 21st. There were 11 clear, 5 fair and 15 cloudy days. Total snowfall, 2.25 inches, of which none remained on the ground at the end of the month. Average sunheat, 47°; sunshine, 43 per cent. Lunar halos on the 15th and 16th. Lightning without thunder on the 16th. Thunderstorm on the 20th; sandstorm on the 21st; hail on the 25th; snow on the 4th, 5th, 10th, 17th, 23d, 24th, 25th, 27th and 28th. Songbirds made their appearance on the 1st. Frost 2-8, 11-18, 20-25, 27-29. Mean dewpoint, 29°. Polarbands on the 12th, 13th, 20th, 27th, 28th and 30th. First bluebirds, frogs croaking and bees humming on the 16th. Geese flying south on the 19th. Sleet and hoarfrost on the 24th and 25th. Dense fog, bluebirds going south on the 27th. Gnats in abundance on the 30th. Grass green on the 31st. Gardening commences. Winds followed by rain N.W., E., S.E., S.W. Winds followed by clear or fair weather N.W., N.E., E., S.E. Weather predictions verified, 99% per cent.

VERMILION COUNTY—MISS C. JEAN TREGO, Observer, Hooperston. Highest barometer, 29.80, on the 12th; lowest, 28.84, on the 19th and 20th; mean, 29.322; range, 0.96. Highest temperature, 66°, on the 30th; lowest, -3°, on the 22°; range, 69°; greatest daily range, 34°, on the 30th; least daily, 7°, on the 5th; mean daily range, 17° 7; mean maximum temperature, 41° 5; mean minimum, 23° 8. The mean temperature of the month was 34° 5. The precipitation was 3.05 inches, falling on ten days, viz: 1st, 9th, 10th, 19th, 20th, 23d, 24th, 25th, 26th and 28th. Prevailing direction of the wind, N.W. There were 11 clear, 6 fair and 14 cloudy days. Total snowfall, 0.76 of an inch, of which none remained on the ground at the end of the month. Sleet on the 26th.

WARREN COUNTY—PROF. J. C. HUTCHISON, Observer, Monmouth. Highest barometer, 30.70, on the 3rd; lowest, 29.56, on the 18th, mean, 30.16; range, 1.14. Highest temperature, 64°, on the 18th; lowest, 1°, on the 23d; range, 63°; greatest daily range, 63°; greatest daily range, 36°, on the 14th; least, 6°, on the 25th; mean daily range, 15°; mean maximum temperature, 40°; mean minimum, 24°. The mean temperature of the month was 30°. There were 14 clear, 1 fair and 16 cloudy days. Total snowfall, 4 inches, of which none remained on the ground at the end of the month. Lunar halo on the 22d. Robins returned on the 13th; bluebirds on the 14th.

WASHINGTON COUNTY—A. G. TUCKER, Observer, Richview. Highest barometer, 30.517, on the 12th; lowest, 29.526, on the

METEOROLOGICAL REPORT.

20th; mean, 30.0°F ; range, $.99^{\circ}$. Highest temperature, $71^{\circ}.4$, on the 31st; lowest, $12^{\circ}.1$, on the 6th; range, $59^{\circ}.3$; greatest daily range $33^{\circ}.0$, on the 8th; least, $3^{\circ}.0$, on the 3d; mean daily range, $16^{\circ}.9$; mean maximum temperature, $48^{\circ}.1$; mean minimum, $31^{\circ}.2$. The mean temperature of the month, $40^{\circ}.1$, was $1^{\circ}.4$ below the mean of the past three years. The precipitation, 4.22 inches, was .28 of an inch below the mean of the past three years, falling on thirteen days, viz: 2d, 4th, 5th, 9th, 10th, 16th, 19th, 20th, 21st, 23d, 24th, 25th and 26th. Mean relative humidity, 76.4 per cent. Prevailing direction of the wind, N.W.; maximum velocity, gale from the N.W., on the 20th. There were 12 clear, 6 fair and 14 cloudy days. Total snowfall, 1.75 inches, of which none remained on the ground at the end of the month. Thunderstorms on the 19th and 20th.

WAYNE COUNTY—JACOB HALL, Observer, Fairfield. Highest temperature, 71° , on the 30th; lowest, 17° , on the 22d; range, 54° ; greatest daily range, 29° , on the 30th; least daily, 3° , on the 4th; mean daily, $14^{\circ}.5$; mean maximum temperature, $47^{\circ}.3$; mean minimum, $32^{\circ}.8$. The mean temperature of

the month, $44^{\circ}.8$, was 4° above the normal for the past six years on average. The precipitation, 3.49 inches, was 0.16 of an inch above the normal for the past six years, falling on eight days, viz: 2d, 10th, 16th, 19th, 21st, 24th, 25th and 26th. There were 9 clear, 5 fair and 17 cloudy days. Total snowfall, $\frac{1}{2}$ inch, of which none remained on the ground at the end of the month. The rain and cloudy weather has prevented farmers seeding oats. Some improvement on the growth of wheat. The peach crop not encouraging. Trees are very much damaged from last year's drought; old trees died.

WILL COUNTY—MISS ANNA B. NASH, Observer, Joliet. Highest temperature, 60° , on the 30th; lowest, 4° , on the 22nd; range, 56° ; greatest daily range, 28° , on the 15th; least, 4° , on the 4th; mean daily range $15^{\circ}.1$; mean maximum temperature, $40^{\circ}.2$; mean minimum temperature, 25° . The mean temperature of the month, $38^{\circ}.4$. The precipitation, 2.35 inches, falling on four days, viz: 1st, 9th, 19th and 24th. Prevailing direction of the wind, S.E. There were 8 clear, 12 fair and 11 cloudy days.

SCHOOL REPORTS.

The complete March Reports received are as follows:

COOK COUNTY. W. B. ALLEN, Observer, Wheeling. Highest temperature, 59°, on the 19th; lowest, zero, on the 22nd; range, 59°; greatest daily range, 26°, on the 15th; least, 4°, on the 13th; mean daily range, 13°.6; mean maximum temperature, 37°; mean minimum, 23°.4. The mean temperature of the month, 30°. The precipitation, 2.45 inches, falling on nine days, viz: 2nd, 10th, 19th, 20th, 23rd, 24th, 25th, 26th and 28th. Prevailing direction of the wind, N.E. There were 7 clear, 10 fair and 14 cloudy days. Total snowfall, 2.2 inches, of which none remained on the ground at the end of the month. Parhelia on the 22nd. Frost on the 6th, 7th, 8th, 12th, 14th, 15th, 23rd and 29th. Hail on the 24th.

DEWITT COUNTY. ADA STACKHOUSE, Observer, Wapella. Highest temperature, 70°, on the 30th; lowest, 8°, on the 22d; range, 62°; greatest daily range, 34°, on the 29th; least, 3°, on the 26th. The mean temperature of the month was 36°.0. The precipitation was 4.00 inches, falling on seven days, viz: 1st, 7th, 10th, 16th, 20th, 25th and 26th. Prevailing direction of the wind, N.W. There were 7 clear, 5 fair and 19 cloudy days. Total snowfall, 3.5 inches, of which none remained on the ground at the end of the month. The past March has been colder than the average of several years. Deep wells are still dry. Winter wheat has been injured materially, and no oats sown during the month.

FORD COUNTY. A. C. RISHEL, Observer, Gibson City. Highest temperature, 64°, on the 30th; lowest, 6°, on the 22d; range, 58°. The mean temperature of the month was 32°.3. The precipitation was 1.88 inches, falling on four days, viz: 10th, 19th, 25th and 26th. Prevailing direction of the wind, N.W. There were 8 clear, 9 fair and 14 cloudy days.

JO DAVIESS COUNTY. MAY CONYNE and MAMIE PEPOON, Pupils of Warren High School, Observers, Warren. Highest barometer, 30.20 on the 12th; lowest, 29.20, on the 18th; mean 29.85; range 1.00. Highest temperature, 52°, on the 19th and 31st; lowest, -10°, on the 21st; range, 62°; greatest daily range, 34°, on the 31st; least, 9°, on the 2d; mean daily range, 17°.5; mean maximum temperature, +30°.6; mean minimum, +13°.1. The mean temperature of the month was +23°.2. The precipitation was 3.59 inches, falling on eight days, viz: 1st, 2d, 4th, 9th, 10th, 18th, 19th and 25th. Prevailing direction of the wind, W. & N.E. There were 6 clear, 9 fair and 16 cloudy days. Total snowfall, 0.24 of an inch, of which a few drifts remained on the ground at the end of the month. Solar halos on the 21st, 22d and 30th, lunar on the 18th and 24th. First bluebird seen on the 8th. First robin seen on the 16th. Pigeons and ducks on the 18th. There was no thaw this winter. Snow covered the ground from the middle of November until the last of March.

KNOX COUNTY. C. F. MARSH and CHAS. W. HUSTON, Observers, Wataga High School. Highest barometer, 30.150, on the 12th; lowest, 29.180, on the 20th; mean, 29.984; range, 0.970. Highest temperature, 59°.0, on the 30th; lowest, -2°.0, on the 22d; range, 61°.0; greatest daily range, 34°, on the 15th; least, 6°.0, on the 4th; mean daily range, 17°.4; mean maximum temperature, 38°.1; mean minimum, 20°.7. The mean temperature of the month was 29°.4. The precipitation was 3.82 inches, falling on three days, viz: 10th, 24th and 25th.

Prevailing direction of the wind, W. There were 11 clear, 7 fair and 13 cloudy days. Total snowfall, 0.5 of an inch, of which none remained on the ground at the end of the month.

LIVINGSTON COUNTY, KNIGHT PEARSE and OSCAR MULFORD, Observers, Dwight. Highest temperature, 60°, on the 30th; lowest, zero, on the 22d; range, 60°; greatest daily range, 28°.8, on the 2d; least, 3°.2, on the 3d; mean daily range, 15°.1; mean maximum temperature, 39°.2; mean minimum, 24°.1. The mean temperature of the month was 31°.6. The precipitation was 3.10 inches, falling on eleven days, viz: 1st, 2d, 9th, 10th, 17th, 19th, 20th, 23d, 24th and 25th. Prevailing direction of the wind, N.E. There were 7 clear, 10 fair and 14 cloudy days. Total snowfall, 0.9 inches, of which none remained on the ground at the end of the month. Solar halos on the 8th and 13th. The 12th, 13th and 14th were very hazy in the afternoon. Bluebirds, larks, robins and blackbirds appeared in large numbers on the 16th.

PERRY COUNTY, CHAS. ZEIGLER, Observer, Old DuQuoin. Highest temperature, 78°.0, on the 31st; lowest, 17°.0, on the 22d; range, 61°; greatest daily range, 37°, on the 18th; least daily, 2°, on the 4th; mean daily range, 17°.6; mean maximum temperature, 52°.0; mean minimum, 34°.4. The mean temperature of the month was 43°.4. The precipitation was 3.50 inches, falling on seven days, viz: 2d, 4th, 10th, 16th, 21st, 24th and 25th. Prevailing direction of the wind, N.W. There were 10 clear, 8 fair and 13 cloudy days. Total snowfall, 3.0 inches, of which none remained on the ground at the end of the month. Thunderstorm on the 10th in the evening.

ROCK ISLAND COUNTY, JEROME MCNEIL, Observer, Moline. Highest barometer, 30.654, on the 8d; lowest, 29.098, on the 19th; mean, 29.939; range, 1.556. Highest temperature, 63°, on the 13th; lowest, 3°.0, on the 22d; greatest daily range, 40°, on the 21st; least, 6°.0, on the 9th. The precipitation was 1.86 inches, falling on seven days, viz: 1st, 4th, 9th, 10th, 11th, 19th and 20th. Prevailing direction of the wind, N.W. There were 10 clear, 9 fair and 12 cloudy days.

SCOTT COUNTY, DAVID LEWIS, Observer, Winchester. Highest temperature, 72°, on the 18th and 30th; lowest, 13°, on the 22d; range, 59°. The mean temperature of the month was 40°. The precipitation was 3.90 inches, falling on eight days, viz: 4th, 9th, 19th, 20th, 24th, 25th, 26th and 28th. Prevailing direction of the wind, N.W. There were 10 clear, 9 fair and 12 cloudy days. Total snowfall, 2.3 inches, of which none remained on the ground at the end of the month.

ST. CLAIR COUNTY, AUGUST GIERSCHER, Observer, New Athens. Highest temperature, 73°, on the 30th; lowest, 16°, on the 22nd; mean, 49°.49. Rain fell on the 2nd, 9th, 10th, 18th, 20th and 24th. Sleet fell on the 3rd, and snow on the 4th, 5th, 19th and 21st. Total snowfall, 5 inches. Total precipitation of rain, sleet and snow, together, 2.18 inches. Frost on 16 days, on the 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 21st, 22nd, 23rd and 24th. Hail on the 10th and thunder also on the 10th. Prevailing direction of the wind, N. & N.W. There were 10 clear, 5 fair and 16 cloudy days. Much of the growing wheat which had withstood the tests of winter and looked promising at the beginning of the month has been killed by the unfavorable weather during the month; and farmers are now plowing up large fields of wheat to use the ground for raising an oat crop; but even this work has been retarded very much by the weather so that at the end of March but very little oats had been sown. Some damage was done to crops on low lands by overflowing rivers and creeks. Buds of all kinds of fruit trees have so far not suffered during the winter and are developing promisingly; only some varieties of grape vines suffered slightly by frost.

WHITESIDE COUNTY, Girls of '89 Second Ward High School, Observers, Sterling. Highest temperature, 58°, on the 2d; lowest, -3°, on the 22d; range, 61°; greatest daily range, 30°, on the 20th; least, 1°, on the 5th; mean daily range, 16°.5; mean maximum temperature, 38°.2; mean minimum, 21°.6. The mean temperature of the month was 29°.0. The precipitation was 3.40 inches, falling on four days, viz: 9th, 10th, 19th and 26th. Prevailing direction of the wind, S. & S.S.E. There were 6 clear, 16 fair and 9 cloudy days. Total snowfall, 1.5 inches, of which none remained on the ground at the end of the month. Rainbow on the 19th. Heavy sleet on the 25th.

BAROMETER FOR MARCH, 1888.

STATIONS.

	Mean.	Highest.	Date.	Lowest.	Date.	Range.
NORTHERN DIVISION.						
Lake Forrest.....	30.013	30.473	28	29.480	20	1.055
Chicago.....	30.110	30.550	12	29.440	20	1.110
Aurora.....	30.021	30.454	3	29.420	19	1.034
Prairieville.....	29.990	30.300	3 & 12	29.350	19	0.950
Oswego.....	30.177	30.561	3	29.397	21	1.173
Monmouth.....						
*Lacon.....	28.723	30.220	3	29.010	20	1.210
*Peoria.....	29.661	30.136	3	29.068	19	0.868
Watseka.....	30.134	30.563	12	29.554	19	1.009
Kankakee.....						
Davenport, Ia.....	30.091	30.580	3	29.400	19	1.180
*Wataga.....	29.984	30.150	12	29.180	20	0.970
*Warren.....	29.850	30.500	12	29.200	18	1.000
Mean.....	30.077	.....			
CENTRAL DIVISION.						
Pekin.....	30.241	30.743	12	29.575	29	1.168
Keokuk, Ia.....	30.066	30.540	3	29.430	19	1.110
*Hoopeston.....	29.322	28.800	11	28.840	19	0.960
Springfield.....	30.124	30.580	3	29.520	19	1.060
Griggsville.....	29.969	30.380	11	29.650	20	0.730
Windsor.....	30.169	30.614	12	29.516	20	1.098
*Martinsville.....	29.355	29.680	3	28.850	20	0.830
Jacksonville.....	30.058	30.516	3	29.466	19	1.050
Philo.....	30.080	30.460	11	29.550	20	0.910
Mean.....	30.108	.....			
SOUTHERN DIVISION.						
Vandalia.....	30.090	30.550	3	29.610	26	0.910
St. Louis Mo.....	30.102	30.550	11	29.519	19	1.040
Richview.....	30.094	30.517	12	29.526	20	0.991
Cairo.....	30.117	30.540	11	29.510	20	0.960
Mean.....	30.076	.....			
State.....	30.084	.....			

*Not corrected for elevation.

Table of Daily and Mean Daily Minimum Temperatures reported by Voluntary and Signal Service Observers for the Month of March, 1888. (From Self Registering Thermometers only.)

SOUTHERN DIVISION.

MICROBIOLOGICAL REPORT

**Daily and Monthly Mean Temperatures, in Degrees, Fahrenheit, reported to the Illinois Department of Agriculture, by
Voluntary and Signal Service Observers for the month of March, 1888. (These means are deduced from the
three observations taken by Voluntary Observers, generally, at 7 A. M., 2 P. M. and 9 P. M., Local
Time, and by Signal Service Observers, at 7 A. M., 3 P. M. and 10 P. M., 75th
Meridian Time.)**

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STATIONS.	MARCH, 1888.																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	mean	
NORTHERN DIVISION.																																	
County. Place.																																	
Jo Daviess . Warren	34	25	14	14	12	16	18	28	36	28	17	21	17	22	35	33	32	42	41	33	11	8	21	18	27	32	30	26	35	36	35	25.6	
Stephenson . Cedarville . . .	37	36	18	19	15	17	24	27	37	36	21	18	17	19	38	32	34	44	52	34	18	11	24	24	29	28	32	32	40	39	34	28.7	
Lake Lake Forest . .	34	26	14	14	13	17	22	28	37	31	21	16	15	22	36	31	27	44	46	32	11	7	19	20	26	34	30	30	35	37	36	26.2	
McHenry . . . Woodstock . .	38	26	15	15	12	16	21	28	26	32	19	16	16	22	36	31	29	42	48	31	18	8	20	17	26	33	28	28	35	38	35	26.1	
McHenry . . . Riley	25	25	16	14	16	20	24	29	36	30	21	19	19	30	37	36	29	44	46	32	12	8	22	18	23	32	30	30	38	42	41	27.4	
Boone Belvidere . .	39	29	18	18	13	17	23	30	37	32	22	19	19	25	38	33	30	43	48	33	15	10	23	22	28	33	30	28	36	40	36	27.9	
Carroll . . . Lanark	38	27	20	18	22	14	20	22	38	36	22	21	23	35	35	34	22	43	51	38	16	10	17	23	26	33	32	37	40	40	28.2		
DeKalb Sycamore . .	46	36	19	19	19	21	28	29	40	39	25	19	19	25	40	33	31	46	53	34	21	11	24	29	28	36	32	31	39	39	35	30.5	
Ogle Mt. Morris . .	41	25	16	13	16	22	24	32	38	30	24	22	20	27	37	33	31	44	46	34	18	12	25	24	29	32	30	30	37	39	39	29.2	
Cook Chicago . . .	44	31	19	19	16	19	23	28	38	33	23	20	18	25	40	35	31	44	45	32	18	12	24	23	28	34	31	29	37	40	37	29.0	
Lee Prairieville . .	47	34	26	20	18	28	24	31	36	36	28	22	18	36	38	40	37	42	46	42	24	16	24	28	30	40	38	40	41	54	54	33.4	
Cook Wheeling . .	49	26	18	19	18	19	25	32	41	28	22	24	24	28	40	35	35	45	47	32	16	13	29	26	29	32	30	33	37	42	40	30.1	
Kane Aurora . . .	44	31	19	19	16	19	23	28	38	33	23	20	18	25	40	35	31	44	45	32	18	12	24	23	28	34	31	29	37	40	37	29.0	
Whiteside Sterling .	44	31	19	17	14	14	23	31	38	29	21	21	25	28	29	28	35	46	45	34	14	14	28	24	28	33	30	28	36	38	41	29.0	
Kendall Oswego . .	44	30	19	18	16	18	23	28	37	32	23	20	18	23	39	34	31	43	49	33	18	10	23	23	27	32	29	36	40	36	28.2		
Will Joliet	49	26	18	19	18	19	25	32	41	28	22	24	24	28	40	35	35	45	47	32	16	13	29	26	29	32	30	33	37	42	40	30.1	
Hock Island Davenport, Ia	43	32	22	23	23	21	26	31	37	32	24	21	22	24	41	38	32	45	53	34	18	12	17	23	31	36	32	32	36	44	35	28.5	
Putnam Hennepin . .	46	29	21	18	19	20	24	30	36	30	23	22	20	24	38	34	33	44	48	34	16	12	27	26	27	44	30	30	36	44	36	29.4	
Grundy Morris . . .	48	31	21	21	18	21	26	31	38	32	24	21	22	24	41	38	32	45	53	34	18	12	17	23	31	36	32	32	36	44	35	28.5	
LaSalle Ottawa . . .	49	31	21	18	19	20	24	31	36	36	28	22	18	36	38	40	37	42	46	42	24	16	24	28	30	40	38	40	41	54	54	33.4	
Bureau Neponset . .	49	31	21	18	19	20	24	31	36	36	28	22	18	36	38	40	37	42	46	42	24	16	24	28	30	40	38	40	41	54	54	33.4	
Mercer Aledo . . .	50	28	21	21	18	19	23	23	40	27	24	25	24	28	41	33	37	49	45	33	17	13	31	27	32	31	31	33	37	43	42	30.9	
Knox Oneida	53	31	24	23	21	22	26	34	43	34	26	27	26	26	43	36	35	49	50	36	21	16	31	32	31	36	33	32	40	47	42	33.1	
Kankakee Kankakee . .	53	31	24	23	21	22	26	34	43	34	26	27	26	26	43	36	35	49	50	36	21	16	31	32	31	36	33	32	40	47	42	33.1	
Marshall Lacon . . .	53	31	24	23	21	22	26	34	43	34	26	27	26	26	43	36	35	49	50	36	21	16	31	32	31	36	33	32	40	47	42	33.1	
Henderson Oquawka . .	53	31	24	23	21	22	26	34	43	34	26	27	26	26	43	36	35	49	50	36	21	16	31	32	31	36	33	32	40	47	42	33.1	
Warren Monmouth . .	53	31	24	23	21	22	26	34	43	34	26	27	26	26	43	36	35	49	50	36	21	16	31	32	31	36	33	32	40	47	42	33.1	

Mean 29.4

CENTRAL DIVISION.

Mean..... 38.2

SOUTHERN DIVISION.

Daily and Monthly Mean Temperature—Continued.

MARCH, 1888.

**COMPARATIVE MEAN TEMPERATURE AND PRECIPITATION FOR
MARCH, 1888.**

STATIONS.	MEAN TEMPERATURE, Deg. Fahrenheit.				PRECIPITATION, Inches and hundredths.			
	Normal.	No. of years.	Feb., 1888.	Departure + or -.	Normal.	No. of years.	Feb., 1888.	Departure + or -.
NORTHERN DIVISION.								
<i>County.</i> <i>Place.</i>								
Lake	Lake Forest							
McHenry	Riley	29.8	27	26.1	-3.7	2.52	27	2.34 -0.18
Stephenson	Cederville	29.6	2	25.6	-4.0	2.68	2	4.65 +1.99
Cook	Chicago	34.7	16	30.5	-4.2	2.63	16	2.99 +0.36
Kane	Aurora	34.1	9	29.0	-5.1	2.17	9	3.19 +1.02
DeKalb	Sycamore	30.9	7	27.9	-3.0	2.20	7	2.59 +0.39
Kendall	Oswego	28.2	8	28.2	0.0	1.87	8	2.77 +0.90
LaSalle	Ottawa							
Rock Island	Davenport, Ia.	35.0	16	30.1	-4.9	2.17	16	2.70 +0.58
Peoria	Peoria	38.2	32	37.1	-1.1	2.66	32	4.03 +1.37
Iroquois	Watseka	34.2	3	32.0	-2.2	1.86	3	2.53 +0.67
CENTRAL DIVISION.								
Ford	Melvin							
Tazewell	Pekin	36.0	3	35.1	-0.9	1.57	3	5.29 +3.72
Hancock	Keokuk, Iowa	37.8	16	34.2	-3.6	2.18	16	3.45 +1.27
Champaign	Philo	35.2	3	33.6	-1.6	3.09	3	2.77 -0.33
Sangamon	Springfield	39.8	8	35.4	-4.4	2.60	8	3.48 +0.88
Pike	Griggsville							
Pike	Louisiana, Mo.	43.8	3	35.8	-8.0	2.60	3	4.63 +2.03
Coles	Mattoon	38.3	8	35.0	-3.3	3.42	8	3.20 -0.22
Christian	Pana	37.5	4	30.7	-6.8	2.29	6	6.08 +3.79
Shelby	Windsor	38.3	3	36.2	-2.1	2.63	3	3.37 +0.74
Greene	White Hall	36.7	3	38.2	+1.5	0.88	3	3.85 +2.47
Adams	Payson	38.6	3	36.7	-1.9	2.36	3	4.24 +1.88
SOUTHERN DIVISION.								
Crawford	Palestine	38.8	6	33.3	-5.5	2.87	6	4.72 +1.85
Bond	Greenville	42.0	9	38.2	-3.8	2.77	5	3.64 +0.87
Madison	Collinsville	41.8	8	38.4	-3.4	2.44	5	3.74 +1.30
Lawrence	Sumner	44.0	2	39.5	-4.5	4.70	2	4.80 +0.10
Clay	Flora	38.0	3	38.0	0.0	5.22	3	5.22 0.00
Clinton	Irishstown	40.1	3	40.2	+0.1	3.46	3	3.40 -0.06
St. Clair	St. Louis, Mo.	43.1	16	40.8	-2.3	2.87	16	3.79 +0.92
Washington	Richview	41.5	3	40.1	-1.4	4.60	3	4.22 -0.28
Hamilton	McLeansboro	41.6	5	41.4	-0.2	2.79	5	4.77 +1.98
Pope	Golconda	45.6	10	43.4	-2.3	3.28	10	6.59 +3.31
Alexander	Cairo	47.1	16	44.9	-2.2	3.79	16	4.91 +1.12

**Daily and Monthly Precipitation, in Inches and hundredths, reported to the Illinois Department of Agriculture by
Voluntary and Signal Service Observers for the month of March, 1888.**

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METEOROLOGICAL REPORT.

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CENTRAL DIVISION.

Tazewell	Pekin	.25	.50	T	T	.05	.50	.25	.01	T	T	1.00	.50	.01	T	T	1.38	.75	1.50	T	03	.529	
Fulton	Fairview	.50	...	...	...	...	.69	...	...	...	...	...	...	...	...	...	.05	1.0	.85	.55	...	T	4.04
Vermillion	Hoopeston	.08	...	...	...	...	?	.90	...	...	...	...	...	...	...	...	...	...	...	...	...	T	3.05
Ford	Gibson City	...	...	...	...	...	...	.45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.88
Hancock	Keokuk, Ia.	.20	.08	T	.01	.05	...	.16	.30	...	...	...	...	...	...	...	...	...	...	...	...	...	3.45
Champaign	Mahomet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Logan	Beason	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.41
DeWitt	Wapella	.01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.27
Champaign	Philo	.24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.77
Cass	Ashland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Adams	Payson	?	.38	...	.05	.06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.24
Sangamon	Springfield	.12	.05	...	T	.02	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.48
Morgan	Jacksonville	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pike	Griggsville	.25	...	...	.15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.84
Edgar	Paris	T	T	...	T	.02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.52
Scott	Winchester	...	...	...	.07	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.90
Macoupin	Virdin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shelby	Windsor	.47	.04	...	...	.06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.87
Coles	Mattoon	.27	...	...	...	.04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.20
Green	White Hall	.19	.08	...	.20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.35
Christian	Pana	0.50	T	...	...	.08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.08
Clark	Martinsville	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.22
Pike	Louisiana, Mo	.05	.05	...	T	.20	...	...	T	T	1.00	...	...	...	...	...	...	...	...	...	...	...	4.63

Mean

3.68

SOUTHERN DIVISION.

Crawford	Palestine	.02	.01	...	...	.10	...	...	70	...	...	...	...	...	...	...	...	...	...	...	...	...	4.72
Fayette	Vandalia	?	.07	...	...	T	...	...	.35	.40	...	...	...	...	...	...	...	...	...	...	...	...	2.82
Effingham	Eberle	?	1.02	...	...	.05	?	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.32
Bond	Greenville	.26	...	...	...	.98	...	...	T	.59	...	...	...	...	...	...	...	...	...	...	...	...	3.84
Lawrence	Sumner	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.80
Richland	Olney	...	...	T	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.25
Clay	Flora	.26	...	...	...	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.23
St. Clair	St. Louis, Mo	.11	T	...	.08	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.79
Madison	Collinsville	.09	...	...	.08	.02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.74
Clinton	Irishtown	.16	...	...	...	.01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.40
Marion	Centralia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2.17
St. Clair	Mascoutah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.80
Edwards	Albion	.15	...	...	T	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.38
Wayne	Fairfield	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.49
Washington	Richview	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.22
St. Clair	New Athens	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Perry	Three Mile	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.10
Randolph	Jordan's Grove	.09	.19	...	.03	.01	...	...	?	.93	...	...	...	...	...	...	...	...	...	...	...	...	5.18
Hamilton	McLeansboro	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.77
Franklin	Benton	.25	...	...	T	.02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4.07

Daily and Monthly Precipitation—Continued.

COMPARATIVE METEOROLOGICAL DATA FOR ILLINOIS DURING MARCH.

Nature of Data.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
Highest pressure, inches.....	30.350.....	30.610.....	30.750.....	30.670.....	30.600.....	30.593.....	30.796.....	30.743.....
Lowest " ".....	29.210.....	29.474.....	29.460.....	29.170.....	29.450.....	29.090.....	29.323.....	29.397.....
Mean " ".....	29.900.....	29.081.....	30.040.....	29.073.....	30.140.....	29.972.....	30.088.....	30.084.....
Range of " ".....	1.140.....	1.136.....	1.290.....	1.500.....	1.150.....	1.503.....	1.473.....	1.346.....
Highest temperature, degrees.....	78.....	80.....	75.....	76.....	80.....	84.....	82.....	84.....
Lowest " ".....	2.....	8.....	3.....	7.....	4.....	7.....	7.....	10.....
Mean " ".....	34.4.....	43.2.....	36.0.....	38.2.....	35.3.....	38.5.....	37.8.....	34.9.....
Range of " ".....	76.....	72.....	72.....	86.....	84.....	92.....	89.....	94.....
Greatest daily range of temp.deg.....	38.....	37.....	35.....	45.....	35.....	54.....	50.....	40.....
Least " ".....	2.....	2.....	0.....	0.....	1.....	0.....	1.....	2.....
Mean " ".....	16.2.....	13.7.....	14.6.....	15.1.....	16.0.....	14.4.....	16.7.....	16.7.....
Mean relative humidity, per cent.....	75.....	71.....	69.....	71.....	68.....	71.....	71.....	75.....
Average number of clear days.....	8.....	8.....	9.....	7.....	8.....	10.....	12.....	10.....
Average number of fair days.....	9.....	12.....	10.....	11.....	17.....	7.....	10.....	8.....
Average number of cloudy days.....	14.....	11.....	12.....	13.....	6.....	14.....	9.....	13.....
Average number of days on which .01 inch or more precip. fell.....	12.....	10.....	8.....	11.....	5.....	9.....	6.....	9.....
Greatest monthly precipitation, in.....	6.48.....	7.50.....	3.66.....	5.60.....	1.95.....	16.23.....	6.56.....	6.59.....
Least monthly precipitation, in.....	0.70.....	2.03.....	0.32.....	1.35.....	0.03.....	1.64.....	0.35.....	1.88.....
Average monthly precipitation, in.....	3.71.....	4.54.....	1.60.....	2.81.....	0.47.....	3.26.....	2.30.....	3.76.....
Prevailing direction of wind.....	N. W.....	N. W.....	N. W.....	N. E.....	N. W.....	N. W.....	N. W.....	N. W.....
Average snowfall, in inches.....	.....	.....	.....	4.9.....	2.9.....	10.2.....	6.1.....	2.4.....

Table of Daily and Mean Daily Maximum Temperatures reported by Voluntary and Signal Service Observers for the Month of March, 1888. (From Self Registering Thermometers only.)

SOUTHERN DIVISION.

Monthly Summary of Meteorological Reports by Voluntary Observers of the Illinois Weather Service During
March, 1888.

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PLACE OF OBSERVATION.	Altitude above sea —in feet.	Latitude N. Monthly mean.	TEMPERATURE.—Deg. Fahr.						Greatest daily Date.	Total inches rain and melted snow.	On ground at end of month.	No. of days	NAME OF OBSERVER.	
			Mean of Maximum.		Mean of Minimum.		Max.	Min.						
			Degree.	Dare.	Degree.	Dare.	Monthly range.	Mean daily range.						
NORTHERN DIVISION.														
Station.	County.	°	°	°	°	°								
Warren	Jo Daviess	840	42 28	90 09	23.2	30.6	13.1	52.0	19	-16	21	62.0	17.5	3.59
Cedarville	Stephenson		42 24	89 36	25.6	....	....	52.0	18	-5	22	57.0	....	4.65
Lake Forest	Lake	593	42 21	87 50	28.7	36.7	19.3	55.0	19	z'ro	22	55.0	17.4	3.58
Woodstock	McHenry		42 16	88 26	26.2	33.7	20.2	57.0	19	-3	22	60.0	13.5	3.23
Riley	McHenry	956	42 12	88 36	26.1	....	....	55.7	19	-2.3	22	58.0	....	2.34
Belvidere	Boone		42 14	88 50	27.4	....	....	54.0	19	-2.0	22	56.0	....	2.67
Lanark	Carroll		42 7	89 51	27.4	....	....	53.0	30	-5.0	22	58.0	....	4.04
Sycamore	DeKalb	800	42 3	88 42	27.9	....	....	52.2	30	z'ro	22	52.2	....	2.59
Mt. Morris	Ogle		42 3	89 27	28.2	30.2	20.2	60.0	19	z'ro	22	60.0	16.0	....
Chicago	Cook	661	41 50	87 40	30.5	37.1	22.7	64.0	19	-1.0	22	65.0	14.4	2.99
Prairieville	Lee		41 50	89 38	29.2	34.2	22.1	64.0	18	z'ro	22	54	12.1	3.93
Wheeling	Cook		41 47	88 8	....	....	....	....	....	....	....	....	....	....
Aurora	Kane	676	41 47	88 8	8.29	0.37	0	23.0	57.0	30	z'ro	22	57.0	14.0
Sterling	Whiteside	550	41 45	88 56	29.0	-0.38	2	21.6	58.0	20	-3.0	22	61.0	16.5
Oswego	Kendall	650	41 41	88 12	28.2	....	....	56.0	30	z'ro	22	56.0	....	2.77
Joliet	Will		41 32	88 4	4.33	4.40	2	25.0	60.0	30	4.0	22	56.0	15.1
Davenport	Ia. Rock Island	615	41 30	90 35	30.1	138.4	22	61.0	18	-0.5	22	61.5	16.3	2.70
Hennepin	Putnam		41 22	89 21	31.1	41.1	21.0	63.0	31	2.0	22	61.0	20.1	2.54
Morris	Grundy		41 22	87 27	24.5	....	....	58.0	30	2.0	22	56.0	....	....
Ottawa	LaSalle	500	41 20	88 52	29.4	38.6	24.6	60.0	30	-2.0	22	62.0	14.0	3.70
Neponset	Bureau		41 20	89 50	....	....	....	....	....	....	....	....	....	....
Aledo	Mercer		41 12	90 45	32.5	....	....	59.0	18	z'ro	22	59.0	....	2.81
Oneida	Knox		41 2	90 15	30.9	....	....	60.0	18	2.0	22	58.0	....	3.75
Kankakee	Kankakee		41 7	87 5	....	....	....	....	....	....	....	....	....	....
Lacon	Marshall		41 1	89 26	33.1	....	....	64.0	30	2.0	22	62.0	....	4.60
Oquawka	Henderson		40 57	90 58	31.2	....	....	62.0	18	z'ro	22	62.0	....	3.30
Monmouth	Warren	784	40 54	90 39	....	....	....	....	....	....	....	....	....	....
Pontiac	Livingston	600	40 54	88 40	....	....	....	....	....	....	....	....	....	....

METEOROLOGICAL REPORT

Dwight.....	Livingston.....	41	488	26	31.6	39.2	24.1	60.0	30	z'ro	22	60.0	15.1	3.10	1.40	25	0.9	0	7	10	14	11	N. E.	O. Mulford & K. Pearse	
Watseka.....	Iroquois.....	640	40	48	87	45.32	0.40	4.24	64.0	30	2.0	22	62.0	16.4	2.53	.89	25	1.5	0	14	3	14	8	N. W.	Henry Upsall.
Peoria.....	Peoria.....	490	40	43	89	43.37	1.44	0.28	2.68	0.30	7.0	22	61.0	15.8	4.03	2.06	25	0.5	0	10	9	12	7	S.	Dr. Fred. Brendel.
Means.....						29.4	37.7	22.1					15.6	3.26			2.8		9	9	13	8	N. W.		
CENTRAL DIVISION.																									
Pekin.....	Tazewell.....	465	40	35	89	39.35.1	43.0	24.5	67.0	13	5.0	22	62.0	18.5	5.29	1.50	26	2.3	0	11	5	15	10	N. W.	Rev. J. E. Terborg.
Fairview.....	Fulton.....	40	38.9	10			55.0	19			z'ro	22	55.0		4.04	1.38	25	1.6	0	13	4	14	6	S. & S. W.	Miss Mary C. Bennett.
Hooperston.....	Vermilion.....	40	30	87	46.3	34.5	41.5	23.8	66.0	30	-3.0	22	69.0	17.7	3.05	.85	25	0.7	0	11	6	14	10	N. W.	Miss C. Jean Trego.
Gibson City.....	Ford.....	40	30	88	30	32.3			6.0	0.30	6.0	22	58.0		1.88	1.25	26			8	9	14	4	N. W.	A. C. Rishel.
Keokuk, Ia.....	Hancock.....	618	40	25	91	25.34.2	44.6	25.6	69.8	18	5.0	22	64.8	19.0	3.45	0.98	26			10	13	8	11	N. W.	F. Z. Gosewisch, S. S. Obs
Mahomet.....	Champaign.....	40	12	88	26																			Dr. C. L. Myers.	
Beason.....	Logan.....	40	10	89	14	34.9			62.0	30	8.0	22	54.0		3.41	0.90	26	2.6	0	14	5	12	12	N. W.	L. H. Sullivan.
Wapella.....	Dewitt.....	40	10	89	20	36.0			70.0	30	8.0	22	62.0		4.27	2.00	25	4.5	0	7	5	19	7	N. W.	Miss Ada Stackhouse.
Philo.....	Champaign.....	771	39	59	88	8.33.6	39.5	27.9	66.0	30	6.0	22	60.0	9.0	2.77	.69	25			13	5	13	7	N. E.	H. A. Burr.
Ashland.....	Cass.....	39	55	90	1																			W. W. Gailey, M. D.	
Payson.....	Adams.....	39	50	91	15	36.7			71.0	18	9.0	22	62.0	15.6	4.24	.74	26	6.0	0	8	11	12	13	N. W.	Daniel E. Robbins.
Springfield.....	Sangamon.....	844	39	47	89	40.35.4	45.0	26.5	66.2	30	8.0	22	60.2	18.5	3.48	.68	25	2.5	0	9	10	12	12	S.	John Craig, S. S. Obs.
Jacksonville.....	Morgan.....	664	39	45	90	18.38.6	143.6	28.1	65.2	30	7.8	22	57.4	15.5	2.24	.46	25	2.5	0	11	7	13	11	W.	Prof. P. J. Hasenstab.
Griggsville.....	Pike.....	650	39	41	90	40.34.5			67.0	18	8.0	22	59.0		3.84	1.15	19	4.8	0	9	5	17	10	S. W.	L. Eastman.
Paris.....	Edgar.....	39	38	87	42	34.0			65.0	30	8.0	22	57.0		3.52	1.12	25	2.2	0	9	8	14	9	N. & N. W.	Wilbur T. Cook.
Winchester.....	Scott.....	39	35	90	15	40.0			62.0	18	13.0	22	59.0		3.90	1.80	25	2.3	0	10	9	12	8	N.	David Lewis.
Virden.....	Macoupin.....	39	32	89	45																			A. C. Gish.	
Windsor.....	Shelby.....	716	39	30	88	35.38.2	44.6	26.4	68.2	30	8.2	22	60.0	18.2	3.37	1.07	25	2.6	0	8	7	16	14	S. E.	A. H. Hatch.
Mattoon.....	Coles.....	724	39	29	88	23.35.0			71.0	30	8.0	22	63.0		3.20	.75	24	1.0	0	10	9	12	12	N.	Wm. Dozier.
White Hall.....	Greene.....	480	39	27	90	25.38.2			68.0	30	10.0	22	58.0		3.35	.75	23	4.0	0	13	3	15	12	N. & N. W.	P. J. Bates.
Pana.....	Christian.....	760	39	25	89	7.30.7			60.0	30	8.0	22	54.0		6.08	2.00	25	1.5	0	10	5	16	13	N. E. & N. W.	J. K. Eberle.
Martinsville.....	Clark.....	610	39	21	87	54.35.9			68.0	30	10.0	22	58.6		2.22			2.2	0	13	2	16	9	N. & N. E.	J. B. Sheapley.
Louis'na, Mo.....	Pike.....	39	10	91	18	35.8	49.3	29.2	73.0	18	9.0	6	64.0	20.2	4.63	1.35	19	5.0	0	16	3	12	9	N. W.	M. J. Hassler.
Means.....						35.2	43.9	26.3					17.6	3.68			2.9	0	11	7	13	10	N. W.		
SOUTHERN DIVISION.																									
Palestine.....	Crawford.....	39	2	87	37	33.3			73.0	18	12.2	22	60.8		4.72	1.45	25	3.8	0	11	6	14	14	S.	Jno. E. Templeton.
Vandalia.....	Fayette.....	39	0	87	9.38.8	45.3	30.4	68.0	18	14.0	22	68.0	15.0	2.32	.90	25	1.0	0	9	7	15	9	N. E.	Jos. Urbani.	
Eberle.....	Effingham.....	38	58	88	30	35.0			70.0	30	10.0	3	60.0		3.32	1.60	10	0.5	0	8	10	13	7	N. W.	Geo. Strong.
Greenville.....	Bond.....	38	55	89	25	38.2	48.5	28.8	73.0	30	10.0	22	63.0	19.7	3.64	0.98	25	2.1	0	12	4	15	10	N. W.	M. S. Oudyn, Ph. G.
Sumner.....	Lawrence.....	38	45	88	52	39.5			72.0	30	14.0	22	58.0		4.80			0.3	0	14	8	9	8		J. A. Fyffe.
Oiney.....	Richland.....	38	45	88	7.39.0			65.0	30	14.0	22	51.0		5.25	1.28	21	1.0	0	12	9	10	9	S. E.	Chas. Fahs.	
Flora.....	Clay.....	38	45	88	30	38.0	47.0	31.0	68.0	30	14.0	22	54.0	16.0	5.22	2.00	24	2.0	0	11	5	15	8	N. W.	L. A. Michels.
St. Louis, Mo.....	St. Clair.....	571	38	45	90	12.40	8.48	8.31.1	76.0	30	14.0	22	62.0	17.7	3.79	1.45	24			11	6	14	10	N.	V. P. Chappel, S. S. Obs.
Collinsville.....	Madison.....	600	38	40	91	0.38	4.47.0	29.8	73.5	30	13.0	22	60.5	17.2	3.74	1.46	24								Dr. J. L. R. Wadsworth.
Irishtown.....	Clinton.....	38	41	89	30	40.2			74.0	30	13.0	22	61.0		3.40	.82	24	0.3	0	8	7	16	11	N. W.	Wm. Rogan.
Centralia.....	Marion.....	492	38	33	89	10.41.0			74.0	31	14.0	22	60.0		2.17					11	6	14	4	N. W.	J. L. Hallam.
Mascoutah.....	St. Clair.....	38	30	89	50				84.0	31	12.0	22	72.0		3.80	2.00	25	1.8	0						Dr. G. Leibrock.
Albion.....	Edwards.....	38	24	88	6.39.4			86.0	31	15.0	22	51.0	14.5	5.33	1.46	25	1.5	0	12	3	16	7	S.	B. T. Michels.	
Fairfield.....	Wayne.....	530	34	20	88	20.44.3	47.3	32.8	71.0	30	17.0	22	54.0	14.5	3.49			0.5	0	9	5	17	8		Jacob Hall.
Kitchview.....	Washington.....	580	38	20	89	10.40	1.48	1.31.2	71.4	31	12.1	22	59.3	16.9	4.22	1.25	24	1.7	0	12	6	13	13	N. W.	A. G. Tucker.

Monthly Summary of Meteorological Reports—Continued.

PLACE OF OBSERVATION.	TEMPERATURE.— <i>Deg. Fahr.</i>										PRECIPITATION.			NO. OF DAYS.			NAME OF OBSERVER.			
	Altitude above sea —in feet.	Latitude N.	Longitude W.	Monthly mean.	Mean of Maximum.	Mean of Minimum.	Max.	Min.	Date.	Monthly range.	Mean daily range.	Total inches rain and melted snow.	Greatest daily Date.	Total snowfall.	On ground at end of month.	Clear.	Fair.	Cloudy.	On which .01-inch or more precip. felt.	
New Athens. St. Clair.....	38 16 89 55	38 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Three-Mile. Perry.....	38 14 89 30	38 5	.....	74.0	31	14.0	22	60.6	.....	6.10	2.00	26	2.0	0	10	9	12	7	.....
Jordan's Grove. Randolph.....	38 14 89 48	41.2	51.3	32.9	76.0	30	16.0	22	54.0	18.4	5.18	3.13	25	3.3	0	11	5	15	12	
McLeansboro. Hamilton.....	38 7 80	35 41.4	.....	72.0	31	16.0	22	58.0	.....	4.77	1.48	25	1.5	0	9	10	12	10	S.E.
Benton. Franklin.....	38 2 88 56	43.8	.....	76.0	31	19.0	22	57.0	.....	4.07	2.10	24	.....	0	8	9	14	9	N.E.
Harrisburg. Saline.....	37 46 88 35	43.8	53.1	34.6	77.0	31	18.0	22	59.0	18.5	4.80	1.95	24	2.0	0	8	11	12	N.W.	
Golconda. Pope.....	37 25 88 25	43.4	.....	78.0	31	20.0	22	58.0	.....	6.59	1.38	24	0.5	0	12	5	14	11	S.W.
Mound City. Pulaski.....	37 7 89 11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N.W. & W.
Cairo. Alexander.....	359 37 0	89 10 44.9	53.0	36.5	76.2	31	21.0	22	55.2	16.5	4.91	1.32	25	10	5	16	13	N.	John McPherson.
Means.....	.....	.....	40.1	48.9	31.9	.....	.....	.....	17.0	4.35	.....	1.5	0	10	7	14	9	.....	Grigg & Grace.
State Averages.....	.....	.....	34.9	43.5	26.8	.....	.....	.....	16.7	3.76	.....	2.4	0	10	8	13	9	.....	J. E. Y. Hanna.
																			Dr. B. C. Taber.	
																			C. L. Bozell, S.S. Obs.	

* Not included when calculating the means.